



# PSCHOOL *Workbook*

## CLASS - 7 MATHS

- Number System
- Fraction
- Area & Perimeter
- Geometry
- Algebra
- Percentage & Ratio
- Commercial Maths



*Scan the QR Code  
present in each  
page and play the  
activities from  
PSchool App*

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Put the right sign ( $<$ ,  $>$ ,  $=$ ) between the fractions.

1)  $\frac{1}{2}$  —  $\frac{6}{10}$

2)  $\frac{1}{2}$  —  $\frac{49}{100}$

3)  $\frac{1}{2}$  —  $\frac{23}{50}$

4)  $\frac{1}{2}$  —  $\frac{501}{1000}$

5)  $\frac{1}{2}$  —  $\frac{3}{7}$

6)  $\frac{1}{4}$  —  $\frac{26}{100}$

7)  $\frac{9}{32}$  —  $\frac{1}{4}$

8)  $\frac{5}{20}$  —  $\frac{1}{4}$

9)  $\frac{26}{100}$  —  $\frac{1}{4}$

10)  $\frac{224}{1000}$  —  $\frac{1}{4}$

11)  $\frac{1}{3}$  —  $\frac{12}{37}$

12)  $\frac{1}{3}$  —  $\frac{11}{30}$

13)  $\frac{1}{3}$  —  $\frac{15}{20}$

14)  $\frac{1}{3}$  —  $\frac{29}{90}$

15)  $\frac{1}{3}$  —  $\frac{10}{31}$

16)  $\frac{1}{5}$  —  $\frac{11}{50}$

17)  $\frac{4}{25}$  —  $\frac{1}{5}$

18)  $\frac{1}{5}$  —  $\frac{19}{100}$

19)  $\frac{21}{105}$  —  $\frac{1}{5}$

20)  $\frac{13}{66}$  —  $\frac{1}{5}$

21)  $\frac{4}{8}$  —  $\frac{7}{15}$

22)  $\frac{10}{40}$  —  $\frac{20}{81}$

23)  $\frac{7}{35}$  —  $\frac{3}{14}$

24)  $\frac{11}{50}$  —  $\frac{20}{100}$

25)  $\frac{12}{60}$  —  $\frac{5}{24}$

26)  $\frac{5}{16}$  —  $\frac{10}{31}$

27)  $\frac{11}{20}$  —  $\frac{51}{100}$

28)  $\frac{23}{25}$  —  $\frac{93}{100}$

29)  $\frac{13}{15}$  —  $\frac{41}{45}$



Circle the smallest fraction

1)  $\frac{5}{16}, \frac{1}{2}, \frac{3}{8}, \frac{1}{4}$

2)  $\frac{4}{6}, \frac{4}{10}, \frac{50}{60}, \frac{15}{30}$

3)  $\frac{3}{12}, \frac{3}{4}, \frac{4}{6}, \frac{1}{2}$

4)  $\frac{6}{20}, \frac{2}{10}, \frac{1}{2}, \frac{3}{5}$

5)  $\frac{4}{5}, \frac{7}{10}, \frac{13}{15}, \frac{19}{20}$

6)  $\frac{2}{9}, \frac{2}{5}, \frac{3}{5}, \frac{7}{9}$

7)  $\frac{4}{11}, \frac{8}{23}, \frac{8}{21}, \frac{10}{23}$

8)  $\frac{2}{7}, \frac{5}{14}, \frac{11}{28}, \frac{3}{21}$

9)  $\frac{6}{13}, \frac{11}{26}, \frac{11}{20}, \frac{14}{21}$

10)  $\frac{3}{5}, \frac{4}{6}, \frac{7}{9}, \frac{11}{13}$

11)  $\frac{14}{19}, \frac{11}{16}, \frac{3}{8}, \frac{8}{13}$

12)  $\frac{7}{10}, \frac{17}{20}, \frac{6}{9}, \frac{27}{30}$

13)  $\frac{6}{12}, \frac{12}{18}, \frac{18}{24}, \frac{24}{30}$

14)  $\frac{70}{80}, \frac{41}{51}, \frac{34}{44}, \frac{55}{65}$

15)  $\frac{4}{12}, \frac{6}{24}, \frac{3}{6}, \frac{16}{30}$

16)  $\frac{3}{5}, \frac{3}{10}, \frac{10}{20}, \frac{3}{4}$

17)  $\frac{5}{8}, \frac{7}{16}, \frac{1}{4}, \frac{1}{2}$

18)  $\frac{2}{36}, \frac{3}{18}, \frac{2}{3}, \frac{1}{9}$

19)  $\frac{7}{50}, \frac{1}{5}, \frac{3}{10}, \frac{6}{25}$



Circle the biggest fraction

1)  $\frac{5}{16}, \frac{1}{2}, \frac{3}{8}, \frac{1}{4}$

2)  $\frac{4}{6}, \frac{4}{10}, \frac{50}{60}, \frac{15}{30}$

3)  $\frac{3}{12}, \frac{3}{4}, \frac{4}{6}, \frac{1}{2}$

4)  $\frac{6}{20}, \frac{2}{10}, \frac{1}{2}, \frac{3}{5}$

5)  $\frac{4}{5}, \frac{7}{10}, \frac{13}{15}, \frac{19}{20}$

6)  $\frac{2}{9}, \frac{2}{5}, \frac{3}{5}, \frac{7}{9}$

7)  $\frac{4}{11}, \frac{8}{23}, \frac{8}{21}, \frac{10}{23}$

8)  $\frac{2}{7}, \frac{5}{14}, \frac{11}{28}, \frac{3}{21}$

9)  $\frac{6}{13}, \frac{11}{26}, \frac{11}{20}, \frac{14}{21}$

10)  $\frac{3}{5}, \frac{4}{6}, \frac{7}{9}, \frac{11}{13}$

11)  $\frac{14}{19}, \frac{11}{16}, \frac{3}{8}, \frac{8}{13}$

12)  $\frac{7}{10}, \frac{17}{20}, \frac{6}{9}, \frac{27}{30}$

13)  $\frac{6}{12}, \frac{12}{18}, \frac{18}{24}, \frac{24}{30}$

14)  $\frac{70}{80}, \frac{41}{51}, \frac{34}{44}, \frac{55}{65}$

15)  $\frac{4}{12}, \frac{6}{24}, \frac{3}{6}, \frac{16}{30}$

16)  $\frac{3}{5}, \frac{3}{10}, \frac{10}{20}, \frac{3}{4}$

17)  $\frac{5}{8}, \frac{7}{16}, \frac{1}{4}, \frac{1}{2}$

18)  $\frac{2}{36}, \frac{3}{18}, \frac{2}{3}, \frac{1}{9}$

19)  $\frac{7}{50}, \frac{1}{5}, \frac{3}{10}, \frac{6}{25}$



Rewrite the fractions in ascending order

1)  $\frac{5}{16}, \frac{1}{2}, \frac{3}{8}, \frac{1}{4} :$

2)  $\frac{4}{6}, \frac{4}{10}, \frac{50}{60}, \frac{15}{30} :$

3)  $\frac{3}{12}, \frac{3}{4}, \frac{4}{6}, \frac{1}{2} :$

4)  $\frac{6}{20}, \frac{2}{10}, \frac{1}{2}, \frac{3}{5} :$

5)  $\frac{4}{5}, \frac{7}{10}, \frac{13}{15}, \frac{19}{20} :$

6)  $\frac{2}{9}, \frac{2}{5}, \frac{3}{5}, \frac{7}{9} :$

7)  $\frac{4}{11}, \frac{8}{23}, \frac{8}{21}, \frac{10}{23} :$

8)  $\frac{2}{7}, \frac{5}{14}, \frac{11}{28}, \frac{3}{21} :$

9)  $\frac{6}{13}, \frac{11}{26}, \frac{11}{20}, \frac{14}{21} :$

10)  $\frac{3}{5}, \frac{4}{6}, \frac{7}{9}, \frac{11}{13} :$





Rewrite the fractions in descending order

1)  $\frac{3}{5}, \frac{4}{6}, \frac{7}{9}, \frac{11}{13} :$

2)  $\frac{14}{19}, \frac{11}{16}, \frac{3}{8}, \frac{8}{13} :$

3)  $\frac{7}{10}, \frac{17}{20}, \frac{6}{9}, \frac{27}{30} :$

4)  $\frac{6}{12}, \frac{12}{18}, \frac{18}{24}, \frac{24}{30} :$

5)  $\frac{70}{80}, \frac{41}{51}, \frac{34}{44}, \frac{55}{65} :$

6)  $\frac{4}{12}, \frac{6}{24}, \frac{3}{6}, \frac{16}{30} :$

7)  $\frac{3}{5}, \frac{3}{10}, \frac{10}{20}, \frac{3}{4} :$

8)  $\frac{5}{8}, \frac{7}{16}, \frac{1}{4}, \frac{1}{2} :$

9)  $\frac{2}{36}, \frac{3}{18}, \frac{2}{3}, \frac{1}{9} :$

10)  $\frac{7}{50}, \frac{1}{5}, \frac{3}{10}, \frac{6}{25} :$



## Match Equivalent Fractions

$$\frac{1}{5}$$

$$\frac{9}{45}$$

$$\frac{6}{13}$$

$$\frac{18}{39}$$

$$\frac{4}{5}$$

$$\frac{12}{15}$$

$$\frac{7}{9}$$

$$\frac{42}{54}$$

$$\frac{3}{7}$$

$$\frac{24}{56}$$

$$\frac{3}{10}$$

$$\frac{2.5}{7}$$

$$\frac{5}{8}$$

$$\frac{1.5}{5}$$

$$\frac{9}{12}$$

$$\frac{2.5}{4}$$

$$\frac{5}{14}$$

$$\frac{2.2}{6}$$

$$\frac{11}{30}$$

$$\frac{2.25}{3}$$

$$\frac{8}{10}$$

$$\frac{20}{24}$$

$$\frac{12}{16}$$

$$\frac{4}{10}$$

$$\frac{6}{15}$$

$$\frac{12}{15}$$

$$\frac{15}{18}$$

$$\frac{9}{12}$$

$$\frac{15}{35}$$

$$\frac{6}{14}$$

$$\frac{6.6}{10}$$

$$\frac{66}{21}$$

$$\frac{22}{7}$$

$$\frac{3.3}{5}$$

$$\frac{1.5}{7}$$

$$\frac{3}{14}$$

$$\frac{1.5}{14}$$

$$\frac{4.5}{15}$$

$$\frac{1.5}{5}$$

$$\frac{0.75}{7}$$



## Addition of unlike fraction

1)  $\frac{2}{3} + \frac{8}{12} = \underline{\quad} + \underline{\quad} = \underline{\quad}$

2)  $\frac{1}{2} + \frac{4}{8} = \underline{\quad} + \underline{\quad} = \underline{\quad}$

3)  $\frac{2}{3} + \frac{10}{15} = \underline{\quad} + \underline{\quad} = \underline{\quad}$

4)  $\frac{8}{12} + \frac{2}{3} = \underline{\quad} + \underline{\quad} = \underline{\quad}$

5)  $\frac{2}{3} + \frac{4}{6} = \underline{\quad} + \underline{\quad} = \underline{\quad}$

6)  $\frac{4}{8} + \frac{2}{4} = \underline{\quad} + \underline{\quad} = \underline{\quad}$

7)  $\frac{2}{5} + \frac{8}{20} = \underline{\quad} + \underline{\quad} = \underline{\quad}$

8)  $\frac{4}{6} + \frac{2}{3} = \underline{\quad} + \underline{\quad} = \underline{\quad}$

9)  $\frac{2}{4} + \frac{15}{20} = \underline{\quad} + \underline{\quad} = \underline{\quad}$

10)  $\frac{10}{15} + \frac{2}{3} = \underline{\quad} + \underline{\quad} = \underline{\quad}$



## Subtraction of unlike fraction

1)  $\frac{4}{6} - \frac{1}{3} = \underline{\quad} - \underline{\quad} = \underline{\quad}$

2)  $\frac{12}{5} - \frac{2}{20} = \underline{\quad} - \underline{\quad} = \underline{\quad}$

3)  $\frac{4}{8} - \frac{1}{4} = \underline{\quad} - \underline{\quad} = \underline{\quad}$

4)  $\frac{2}{3} - \frac{2}{6} = \underline{\quad} - \underline{\quad} = \underline{\quad}$

5)  $\frac{4}{4} - \frac{2}{16} = \underline{\quad} - \underline{\quad} = \underline{\quad}$

6)  $\frac{6}{12} - \frac{1}{4} = \underline{\quad} - \underline{\quad} = \underline{\quad}$

7)  $\frac{3}{5} - \frac{2}{15} = \underline{\quad} - \underline{\quad} = \underline{\quad}$

8)  $\frac{15}{25} - \frac{2}{5} = \underline{\quad} - \underline{\quad} = \underline{\quad}$

9)  $\frac{4}{5} - \frac{3}{20} = \underline{\quad} - \underline{\quad} = \underline{\quad}$

10)  $\frac{6}{9} - \frac{1}{3} = \underline{\quad} - \underline{\quad} = \underline{\quad}$



Add the Unlike Fractions and simplify it

$$1) \frac{1}{2} + \frac{2}{3} + \frac{1}{6} = \frac{3 + 4 + 1}{6} = \frac{8}{6} = \frac{4}{3} = 1\frac{1}{3}$$

$$2) \frac{1}{4} + \frac{1}{2} + \frac{3}{4} = \underline{\hspace{2cm}} = \hspace{1cm} =$$

$$3) \frac{1}{10} + \frac{2}{5} + \frac{3}{10} = \underline{\hspace{2cm}} = \hspace{1cm} =$$

$$4) \frac{2}{7} + \frac{3}{14} + \frac{12}{14} = \underline{\hspace{2cm}} = \hspace{1cm} =$$

$$5) \frac{7}{25} + \frac{4}{5} + \frac{16}{25} = \underline{\hspace{2cm}} = \hspace{1cm} =$$

$$6) \frac{6}{13} + \frac{15}{26} + \frac{11}{13} = \underline{\hspace{2cm}} = \hspace{1cm} =$$

$$7) \frac{3}{4} + \frac{3}{8} + \frac{5}{8} = \underline{\hspace{2cm}} = \hspace{1cm} =$$

$$8) \frac{1}{2} + \frac{2}{3} + \frac{4}{5} = \underline{\hspace{2cm}} = \hspace{1cm} =$$

$$9) \frac{2}{5} + \frac{41}{50} + \frac{2}{10} = \underline{\hspace{2cm}} = \hspace{1cm} =$$

$$10) \frac{19}{25} + \frac{11}{50} + \frac{9}{10} = \underline{\hspace{2cm}} =$$



Add the Unlike Fractions and simplify it

$$1) \frac{1}{2} + \frac{2}{3} + \frac{3}{4} = \underline{\hspace{2cm}} = \hspace{1cm} =$$

$$2) \frac{2}{3} + \frac{7}{9} + \frac{6}{27} = \underline{\hspace{2cm}} = \hspace{1cm} =$$

$$3) \frac{2}{5} + \frac{7}{10} + \frac{11}{20} = \underline{\hspace{2cm}} = \hspace{1cm} =$$

$$4) \frac{7}{15} + \frac{21}{30} + \frac{3}{5} = \underline{\hspace{2cm}} = \hspace{1cm} =$$

$$5) \frac{6}{13} + \frac{15}{26} + \frac{11}{13} = \underline{\hspace{2cm}} = \hspace{1cm} =$$

$$6) \frac{3}{4} + \frac{3}{8} + \frac{22}{24} = \underline{\hspace{2cm}} = \hspace{1cm} =$$

$$7) \frac{3}{40} + \frac{3}{4} + \frac{12}{20} = \underline{\hspace{2cm}} = \hspace{1cm} =$$

$$8) \frac{21}{25} + \frac{71}{100} + \frac{12}{50} = \underline{\hspace{2cm}} = \hspace{1cm} =$$

$$9) \frac{9}{10} + \frac{6}{20} + \frac{6}{30} = \underline{\hspace{2cm}} = \hspace{1cm} =$$

$$10) \frac{4}{7} + \frac{8}{14} + \frac{6}{21} = \underline{\hspace{2cm}} =$$



Simplify the expression.

$$1) \frac{4}{5} + \frac{2}{3} - \frac{1}{10} = \underline{\hspace{2cm}} = \hspace{2cm}$$

$$2) \frac{2}{3} - \frac{1}{9} + \frac{3}{5} = \underline{\hspace{2cm}} = \hspace{2cm}$$

$$3) \frac{2}{25} - \frac{7}{10} - \frac{11}{20} = \underline{\hspace{2cm}} = \hspace{2cm}$$

$$4) \frac{21}{25} - \frac{1}{5} + \frac{2}{3} = \underline{\hspace{2cm}} = \hspace{2cm}$$

$$5) \frac{6}{13} + \frac{5}{26} + \frac{11}{65} = \underline{\hspace{2cm}} = \hspace{2cm}$$

$$6) \frac{5}{6} + \frac{7}{8} - \frac{1}{4} = \underline{\hspace{2cm}} = \hspace{2cm}$$

$$7) \frac{4}{5} - \frac{1}{4} + \frac{7}{10} = \underline{\hspace{2cm}} = \hspace{2cm}$$

$$8) \frac{21}{25} - \frac{3}{20} + \frac{36}{50} = \underline{\hspace{2cm}} = \hspace{2cm}$$

$$9) \frac{9}{10} - \frac{4}{20} - \frac{13}{15} = \underline{\hspace{2cm}} = \hspace{2cm}$$

$$10) \frac{3}{4} + \frac{6}{7} - \frac{3}{14} = \underline{\hspace{2cm}} = \hspace{2cm}$$



## Fraction Division

1)  $\frac{6}{9} \div \frac{4}{9} = \underline{\quad} \times \underline{\quad} = \underline{\quad}$

2)  $\frac{4}{7} \div \frac{1}{12} = \underline{\quad} \times \underline{\quad} = \underline{\quad}$

3)  $\frac{2}{4} \div \frac{9}{8} = \underline{\quad} \times \underline{\quad} = \underline{\quad}$

4)  $\frac{6}{12} \div \frac{5}{4} = \underline{\quad} \times \underline{\quad} = \underline{\quad}$

5)  $\frac{6}{4} \div \frac{3}{11} = \underline{\quad} \times \underline{\quad} = \underline{\quad}$

6)  $\frac{7}{10} \div \frac{1}{7} = \underline{\quad} \times \underline{\quad} = \underline{\quad}$

7)  $\frac{8}{9} \div \frac{2}{11} = \underline{\quad} \times \underline{\quad} = \underline{\quad}$

8)  $\frac{2}{5} \div \frac{5}{7} = \underline{\quad} \times \underline{\quad} = \underline{\quad}$

9)  $\frac{9}{5} \div \frac{5}{10} = \underline{\quad} \times \underline{\quad} = \underline{\quad}$

10)  $\frac{7}{10} \div \frac{3}{12} = \underline{\quad} \times \underline{\quad} = \underline{\quad}$





Write the decimal equivalent.

1)  $\frac{3}{12} =$

2)  $\frac{3}{15} =$

3)  $\frac{14}{20} =$

4)  $\frac{12}{15} =$

5)  $\frac{7}{14} =$

6)  $\frac{15}{50} =$

7)  $\frac{9}{15} =$

8)  $\frac{18}{20} =$

9)  $\frac{21}{70} =$

10)  $\frac{6}{12} =$

11)  $\frac{54}{60} =$

12)  $\frac{21}{35} =$

13)  $\frac{24}{30} =$

14)  $\frac{2}{10} =$

15)  $\frac{15}{25} =$

16)  $\frac{49}{70} =$

17)  $\frac{6}{30} =$

18)  $\frac{2}{8} =$

19)  $\frac{10}{25} =$

20)  $\frac{7}{28} =$

21)  $\frac{4}{16} =$

22)  $\frac{20}{25} =$

23)  $\frac{27}{30} =$

24)  $\frac{16}{20} =$

25)  $\frac{15}{20} =$

26)  $\frac{9}{12} =$

27)  $\frac{6}{24} =$

28)  $\frac{8}{10} =$

29)  $\frac{5}{10} =$



Write the fraction equivalent.

1)  $0.25 = \underline{\hspace{2cm}}$

2)  $0.4 = \underline{\hspace{2cm}}$

3)  $0.13 = \underline{\hspace{2cm}}$

4)  $0.78 = \underline{\hspace{2cm}}$

5)  $0.9 = \underline{\hspace{2cm}}$

6)  $0.72 = \underline{\hspace{2cm}}$

7)  $0.89 = \underline{\hspace{2cm}}$

8)  $0.76 = \underline{\hspace{2cm}}$

9)  $0.75 = \underline{\hspace{2cm}}$

10)  $0.06 = \underline{\hspace{2cm}}$

11)  $0.6 = \underline{\hspace{2cm}}$

12)  $0.09 = \underline{\hspace{2cm}}$

13)  $0.41 = \underline{\hspace{2cm}}$

14)  $0.49 = \underline{\hspace{2cm}}$

15)  $0.15 = \underline{\hspace{2cm}}$

16)  $0.5 = \underline{\hspace{2cm}}$

17)  $0.8 = \underline{\hspace{2cm}}$

18)  $0.125 = \underline{\hspace{2cm}}$

19)  $0.3 = \underline{\hspace{2cm}}$

20)  $0.7 = \underline{\hspace{2cm}}$

21)  $0.2 = \underline{\hspace{2cm}}$

22)  $0.375 = \underline{\hspace{2cm}}$

23)  $0.1 = \underline{\hspace{2cm}}$

24)  $0.625 = \underline{\hspace{2cm}}$

25)  $0.37 = \underline{\hspace{2cm}}$

26)  $0.64 = \underline{\hspace{2cm}}$

27)  $0.32 = \underline{\hspace{2cm}}$

28)  $0.875 = \underline{\hspace{2cm}}$

29)  $1 = \underline{\hspace{2cm}}$



Write the missing numbers in equivalent fractions

$$1) \frac{1}{5} = \frac{\quad}{10} = \frac{10}{\quad}$$

$$2) \frac{1}{2} = \frac{\quad}{50} = \frac{50}{\quad}$$

$$3) \frac{7}{21} = \frac{\quad}{3} = \frac{21}{\quad}$$

$$4) \frac{\quad}{5} = \frac{\quad}{25} = \frac{100}{250}$$

$$5) \frac{\quad}{6} = \frac{\quad}{3} = \frac{50}{75}$$

$$6) \frac{1}{4} = \frac{\quad}{20} = \frac{50}{\quad}$$

$$7) \frac{7}{9} = \frac{\quad}{99} = \frac{35}{\quad}$$

$$8) \frac{3}{5} = \frac{\quad}{20} = \frac{15}{\quad}$$

$$9) \frac{\quad}{300} = \frac{3}{4} = \frac{300}{\quad}$$

$$10) \frac{\quad}{40} = \frac{4}{5} = \frac{80}{\quad}$$

$$11) \frac{\quad}{15} = \frac{45}{75} = \frac{6}{\quad}$$

$$12) \frac{\quad}{7} = \frac{\quad}{28} = \frac{120}{140}$$

$$13) \frac{\quad}{60} = \frac{\quad}{120} = \frac{12}{15}$$

$$14) \frac{\quad}{42} = \frac{\quad}{28} = \frac{6}{7}$$

$$15) \frac{7}{11} = \frac{\quad}{55} = \frac{105}{\quad}$$

$$16) \frac{3}{8} = \frac{\quad}{32} = \frac{33}{\quad}$$

$$17) \frac{\quad}{77} = \frac{\quad}{121} = \frac{10}{11}$$

$$18) \frac{\quad}{200} = \frac{26}{50} = \frac{13}{\quad}$$

$$19) \frac{\quad}{88} = \frac{8}{11} = \frac{40}{\quad}$$



## Fractions of Numbers

1)  $\frac{1}{2}$  of 14 =

2)  $\frac{1}{4}$  of 16 =

3)  $\frac{1}{2}$  of 26 =

4)  $\frac{1}{3}$  of 27 =

5)  $\frac{1}{4}$  of 36 =

6)  $\frac{1}{3}$  of 42 =

7)  $\frac{1}{5}$  of 45 =

8)  $\frac{1}{6}$  of 66 =

9)  $\frac{1}{5}$  of 100 =

10)  $\frac{1}{4}$  of 100 =

11)  $\frac{1}{7}$  of 91 =

12)  $\frac{1}{6}$  of 90 =

13)  $\frac{1}{8}$  of 64 =

14)  $\frac{1}{7}$  of 56 =

15)  $\frac{1}{5}$  of 75 =

16)  $\frac{1}{7}$  of 105 =

17)  $\frac{1}{11}$  of 99 =

18)  $\frac{1}{10}$  of 140 =

19)  $\frac{1}{9}$  of 63 =

20)  $\frac{1}{4}$  of 96 =

21)  $\frac{1}{8}$  of 120 =

22)  $\frac{1}{10}$  of 200 =

23)  $\frac{1}{5}$  of 200 =

24)  $\frac{1}{4}$  of 200 =

25)  $\frac{1}{20}$  of 200 =

26)  $\frac{1}{20}$  of 40 =

27)  $\frac{1}{25}$  of 125 =

28)  $\frac{1}{11}$  of 121 =

29)  $\frac{1}{13}$  of 65 =



## Fractions of Numbers

1)  $\frac{1}{2}$  of 3 =

2)  $\frac{1}{4}$  of 5 =

3)  $\frac{1}{6}$  of 3 =

4)  $\frac{1}{10}$  of 7 =

5)  $\frac{1}{10}$  of 15 =

6)  $\frac{1}{8}$  of 28 =

7)  $\frac{1}{9}$  of 99 =

8)  $\frac{1}{2}$  of 21 =

9)  $\frac{1}{2}$  of 39 =

10)  $\frac{1}{4}$  of 25 =

11)  $\frac{1}{4}$  of 42 =

12)  $\frac{1}{3}$  of 31 =

13)  $\frac{1}{3}$  of 20 =

14)  $\frac{1}{5}$  of 17 =

15)  $\frac{1}{6}$  of 21 =

16)  $\frac{1}{8}$  of 100 =

17)  $\frac{1}{8}$  of 50 =

18)  $\frac{1}{8}$  of 25 =

19)  $\frac{1}{8}$  of 84 =

20)  $\frac{1}{10}$  of 88 =

21)  $\frac{1}{10}$  of 67 =

22)  $\frac{1}{20}$  of 30 =

23)  $\frac{1}{20}$  of 3 =

24)  $\frac{1}{30}$  of 36 =

25)  $\frac{1}{20}$  of 50 =

26)  $\frac{1}{10}$  of 92 =

27)  $\frac{1}{15}$  of 50 =

28)  $\frac{1}{15}$  of 20 =

29)  $\frac{1}{15}$  of 35 =



## Simplify Expression

1)  $\frac{1}{5} \times \frac{5}{10} \times \frac{10}{15} =$

2)  $\frac{1}{2} \times \frac{2}{3} \times \frac{3}{4} =$

3)  $\frac{22}{7} \times \frac{7}{22} \times \frac{5}{7} =$

4)  $\frac{4}{7} \times \frac{14}{4} \times \frac{2}{3} =$

5)  $\frac{9}{90} \times \frac{8}{80} \times \frac{7}{70} =$

6)  $\frac{7}{5} \times \frac{5}{4} \times \frac{1}{7} =$

7)  $\frac{25}{100} \times \frac{20}{80} \times \frac{1}{4} =$

8)  $\frac{9}{11} \times \frac{33}{3} \times \frac{5}{6} =$

9)  $\frac{2}{5} \times \frac{2}{5} \times \frac{25}{80} =$

10)  $\frac{3}{12} \times \frac{4}{3} \times \frac{3}{4} =$

11)  $\frac{6}{10} \times \frac{11}{12} \times \frac{10}{3} =$

12)  $\frac{25}{2} \times \frac{5}{25} \times \frac{6}{5} =$

13)  $\frac{4}{11} \times \frac{1}{2} \times \frac{44}{8} =$

14)  $\frac{10}{15} \times \frac{12}{100} \times \frac{15}{6} =$

15)  $\frac{22}{7} \times \frac{1}{3} \times \frac{7}{11} =$

16)  $\frac{9}{11} \times \frac{22}{7} \times \frac{7}{13} =$

17)  $\frac{6}{20} \times \frac{3}{5} \times \frac{100}{39} =$

18)  $\frac{3}{15} \times \frac{2}{7} \times \frac{45}{9} =$

19)  $\frac{18}{25} \times \frac{75}{27} \times \frac{20}{30} =$



Convert the below percentages into fractions in simple form.

1)  $50\% =$

2)  $25\% =$

3)  $20\% =$

4)  $80\% =$

5)  $60\% =$

6)  $75\% =$

7)  $40\% =$

8)  $76\% =$

9)  $36\% =$

10)  $10\% =$

11)  $30\% =$

12)  $70\% =$

13)  $55\% =$

14)  $90\% =$

15)  $15\% =$

16)  $5\% =$

17)  $95\% =$

18)  $85\% =$

19)  $16\% =$

20)  $24\% =$

21)  $44\% =$

22)  $65\% =$

23)  $35\% =$

24)  $39\% =$

25)  $42\% =$

26)  $45\% =$

27)  $56\% =$

28)  $92\% =$

29)  $81\% =$



Convert the below fractions into percentages.

1)  $\frac{1}{4} =$

2)  $\frac{3}{4} =$

3)  $\frac{1}{2} =$

4)  $\frac{1}{5} =$

5)  $\frac{2}{5} =$

6)  $\frac{3}{5} =$

7)  $\frac{3}{10} =$

8)  $\frac{7}{10} =$

9)  $\frac{4}{5} =$

10)  $\frac{6}{25} =$

11)  $\frac{9}{25} =$

12)  $\frac{13}{25} =$

13)  $\frac{1}{10} =$

14)  $\frac{9}{10} =$

15)  $\frac{1}{25} =$

16)  $\frac{11}{50} =$

17)  $\frac{17}{50} =$

18)  $\frac{3}{25} =$

19)  $\frac{23}{25} =$

20)  $\frac{33}{50} =$

21)  $\frac{41}{50} =$

22)  $\frac{21}{25} =$

23)  $\frac{17}{25} =$

24)  $\frac{37}{50} =$

25)  $\frac{49}{50} =$

26)  $\frac{21}{50} =$

27)  $\frac{11}{25} =$

28)  $\frac{43}{50} =$

29)  $\frac{27}{50} =$





## Add the Mixed Fractions

1)  $12\frac{1}{2} + 12\frac{1}{2} =$

2)  $37\frac{1}{2} + 22\frac{1}{2} =$

3)  $64\frac{1}{4} + 34\frac{3}{4} =$

4)  $31\frac{2}{5} + 11\frac{2}{5} =$

5)  $11\frac{3}{11} + 88\frac{2}{11} =$

6)  $4\frac{1}{2} + 14\frac{3}{4} =$

7)  $6\frac{1}{6} + 12\frac{2}{3} =$

8)  $7\frac{1}{4} + 14\frac{1}{8} =$

9)  $5\frac{5}{6} + 3\frac{1}{6} =$

10)  $49\frac{3}{4} + 25\frac{3}{4} =$

11)  $54\frac{5}{7} + 42\frac{3}{4} =$

12)  $13\frac{7}{9} + 43\frac{7}{18} =$

13)  $100\frac{3}{26} + 50\frac{3}{13} =$

14)  $91\frac{3}{11} + 53\frac{31}{33} =$

15)  $43\frac{5}{9} + 49\frac{9}{10} =$

16)  $18\frac{5}{6} + 24\frac{5}{18} =$

17)  $33\frac{1}{3} + 33\frac{1}{3} =$

18)  $24\frac{2}{13} + 75\frac{1}{39} =$

19)  $14\frac{5}{13} + 11\frac{8}{13} =$



## Subtraction of Mixed Fractions

1)  $57\frac{1}{2} - 12\frac{1}{2} =$

2)  $72\frac{1}{2} - 29\frac{1}{2} =$

3)  $64\frac{3}{4} - 34\frac{1}{2} =$

4)  $31\frac{4}{5} - 11\frac{2}{5} =$

5)  $92\frac{8}{11} - 68\frac{2}{11} =$

6)  $54\frac{3}{4} - 14\frac{1}{2} =$

7)  $26\frac{2}{3} - 12\frac{1}{6} =$

8)  $70\frac{1}{4} - 14\frac{1}{8} =$

9)  $5\frac{1}{6} - 3\frac{5}{6} =$

10)  $49\frac{1}{4} - 25\frac{3}{4} =$

11)  $54\frac{5}{7} - 42\frac{3}{4} =$

12)  $53\frac{7}{9} - 43\frac{7}{18} =$

13)  $100\frac{3}{26} - 50\frac{3}{13} =$

14)  $91\frac{3}{11} - 53\frac{31}{33} =$

15)  $43\frac{5}{9} - 39\frac{9}{10} =$

16)  $38\frac{5}{6} - 24\frac{5}{18} =$

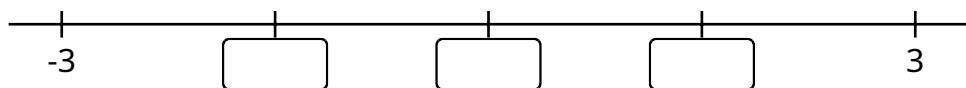
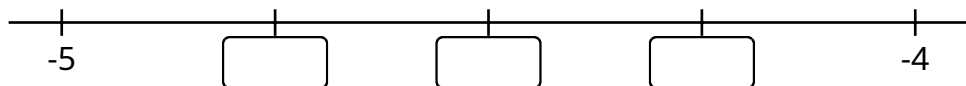
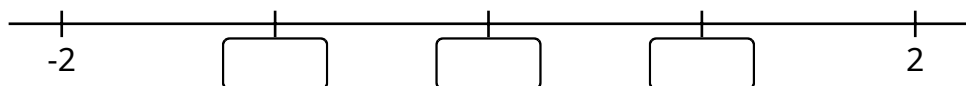
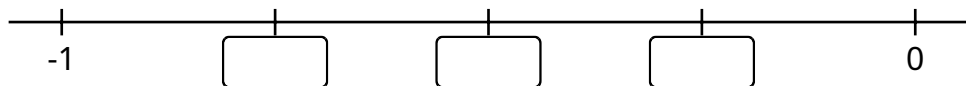
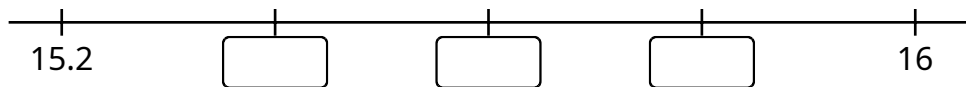
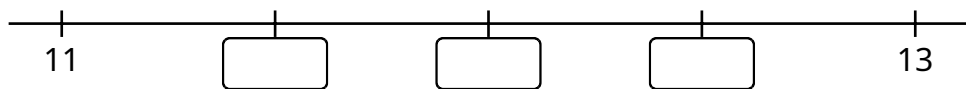
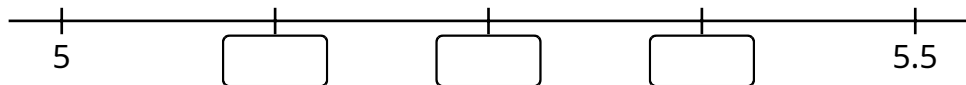
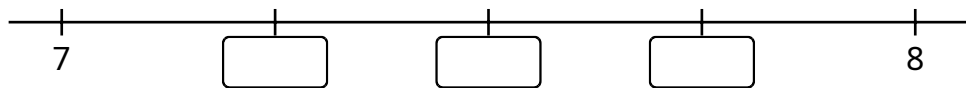
17)  $66\frac{1}{3} - 33\frac{2}{3} =$

18)  $24\frac{2}{13} - 7\frac{1}{39} =$

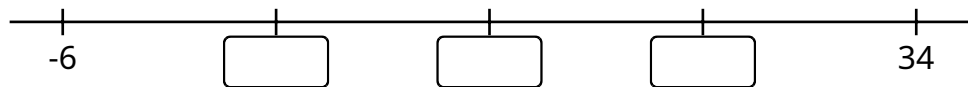
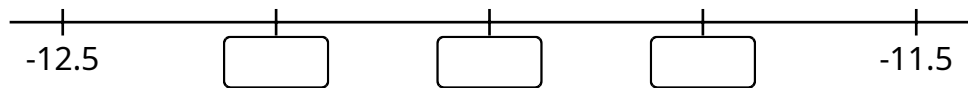
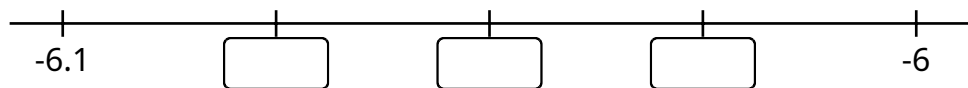
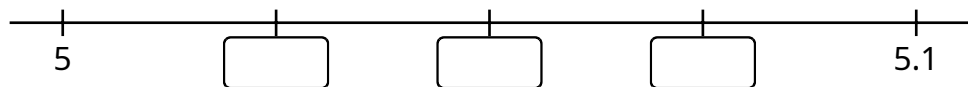
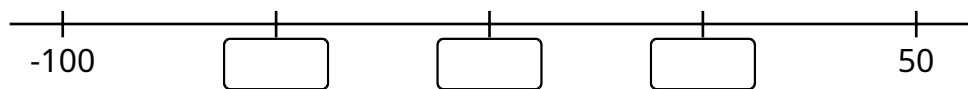
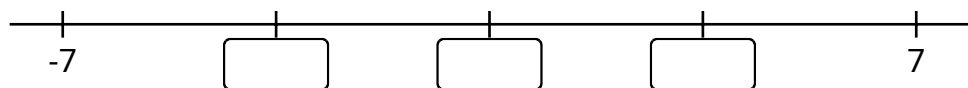
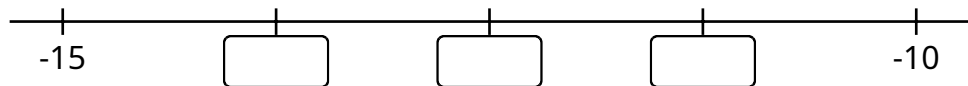
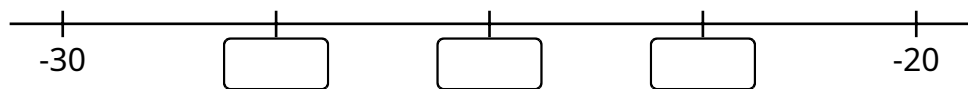
19)  $14\frac{5}{13} - 11\frac{8}{13} =$



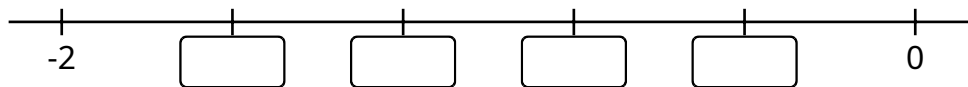
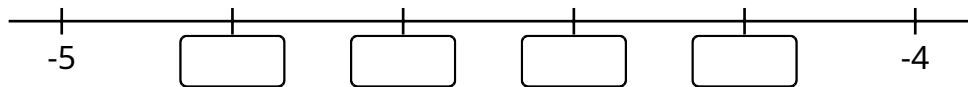
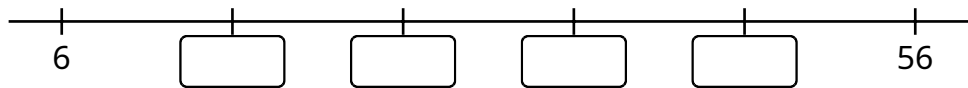
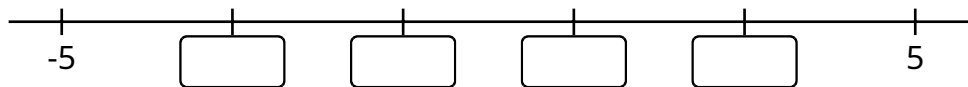
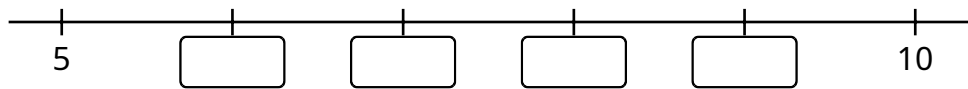
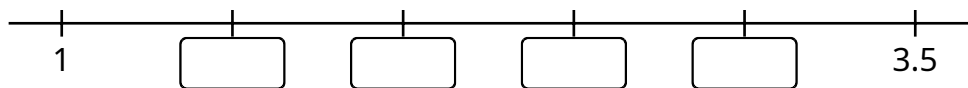
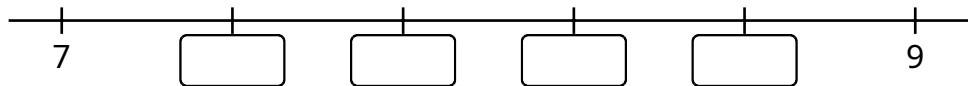
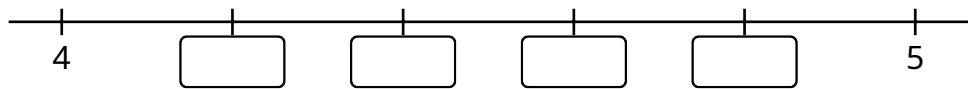
Fill the missing numbers in the numberline.



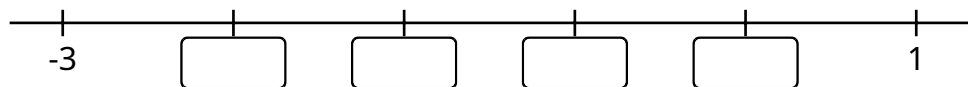
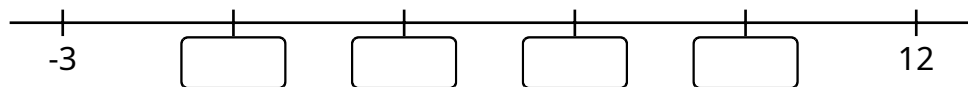
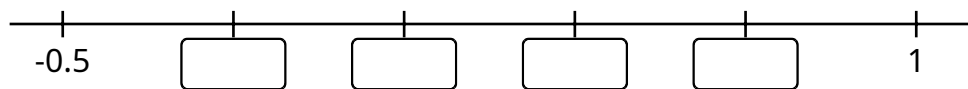
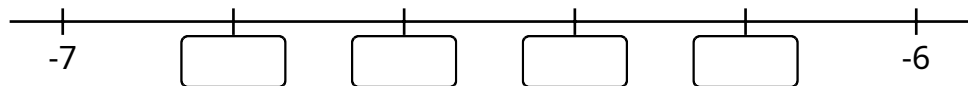
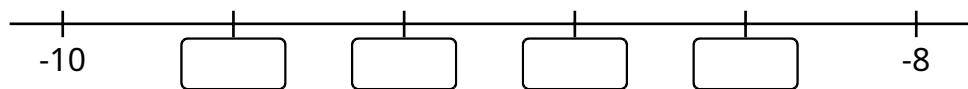
Fill the missing numbers in the numberline.



Fill the missing numbers in the numberline.



Fill the missing numbers in the numberline.



Fill the missing numbers in the below table.

|    | C P   | profit or loss | S P  | profit or loss % |
|----|-------|----------------|------|------------------|
| 1  | ₹ 50  | ₹ 10 profit    |      |                  |
| 2  | ₹ 100 | ₹ 30 profit    |      |                  |
| 3  | ₹ 150 | ₹ 50 profit    |      |                  |
| 4  | ₹ 100 | ₹ 15 loss      |      |                  |
| 5  | ₹ 120 | ₹ 20 loss      |      |                  |
| 6  | ₹ 50  | ₹ 10 loss      |      |                  |
| 7  | ₹ 100 | ₹ 30 loss      |      |                  |
| 8  | ₹ 150 | ₹ 50 loss      |      |                  |
| 9  | ₹ 100 | ₹ 15 profit    |      |                  |
| 10 | ₹ 120 | ₹ 20 profit    |      |                  |
| 11 |       | ₹ 3 profit     | ₹ 13 |                  |
| 12 |       | ₹ 2 loss       | ₹ 18 |                  |
| 13 |       | ₹ 9 profit     | ₹ 50 |                  |



Fill the missing numbers in the below table.

|    | C P   | profit or loss | S P   | P or L % |
|----|-------|----------------|-------|----------|
| 1  |       | ₹ 7 loss       | ₹ 43  |          |
| 2  |       | ₹ 15 loss      | ₹ 80  |          |
| 3  |       | ₹ 20 profit    | ₹ 100 |          |
| 4  | ₹ 135 |                | ₹ 150 |          |
| 5  | ₹ 71  |                | ₹ 78  |          |
| 6  | ₹ 95  |                | ₹ 81  |          |
| 7  |       | ₹ 22 loss      | ₹ 88  |          |
| 8  | ₹ 150 |                | ₹ 115 |          |
| 9  | ₹ 185 |                | ₹ 160 |          |
| 10 | ₹ 74  | ₹ 24 profit    |       |          |
| 11 |       | ₹ 9 loss       | ₹ 81  |          |
| 12 | ₹ 500 | ₹ 50 loss      |       |          |
| 13 | ₹ 500 |                |       | 10% loss |





## Word Problems

- 1) Gopal sold onions for ₹ 30 per kg, and got a profit of ₹ 5 per kg. He sold 50 kg of onions. What is his CP and total Profit?

Profit per kg = ₹

Total Profit in selling 50 kg = ₹

CP per kg = ₹

CP of 50 kg = ₹

- 2) Ravi bought a pack of 10 pens for ₹ 100. He sold each pen for ₹ 12. What is his profit?

SP of one pen = ₹

SP of 10 pens = ₹

CP of 10 pens = ₹

Profit = ₹

- 3) Ashok bought a 10 kg box of apple for ₹ 1000 and sold them at the price of ₹ 115 per kg. What is his profit?

SP of 1 kg of apple = ₹

SP of 10 kg = ₹

CP of 10 kg = ₹

Profit = ₹



## Word Problems

- 1) Kadar bought 100 kg of mangoes for ₹ 10000 and spent ₹ 1000 for transportation. He sold them at ₹ 120 per kg. What is his profit.

CP of 100 kg of mangoes = ₹

Transportation cost = ₹

So, Total CP = ₹

SP of 1 kg = ₹

SP of 100 kg = ₹

Profit = ₹

- 2) A TV was bought for ₹ 30000 and sold at the loss of ₹ 3000. What is the SP?

CP = ₹

Loss = ₹

SP = CP - Loss =

- 3) Ravi bought a pencil and rubber for ₹ 15. He sold the pencil for ₹ 12 and sold the rubber for ₹ 6. What is his profit?

Total CP of pencil and rubber = ₹

Total SP of pencil and rubber = ₹

Profit = SP - CP = ₹



## Word Problems

- 1) Gopal bought 100 kg of mangoes for ₹ 5000. He sold the first 80 kg for ₹ 60 per kg. As the business got slow, he sold the remaining 20 kg for ₹ 30 per kg. What is his profit?

SP of the first 80 kg = ₹

SP of the last 20 kg = ₹

Total SP = ₹

Profit = ₹

- 2) Rani bought a dozen egg for ₹ 100 and sold them for ₹10 each. What was her profit?

CP of a dozen egg = ₹

SP of a dozen egg = ₹

Profit = ₹

- 3) Sumi bought a table for ₹ 12000 and sold it at a loss of ₹ 1500. What is the SP?

CP =

Loss =

SP = CP - Loss =

- 4) The cost price of 6 pencils is equal to the selling price of 5 pencils. Each pencil was sold for ₹ 12. What is the CP of 1 pencil?

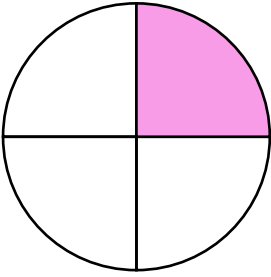
SP of 5 pencils = ₹

CP of 6 pencils = ₹

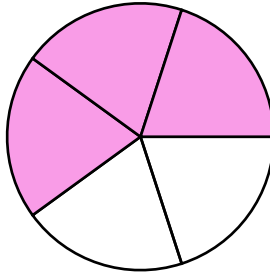
CP of 1 pencil = ₹



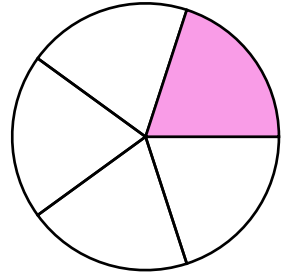
Write the ratio between the filled and unfilled part of the below image.



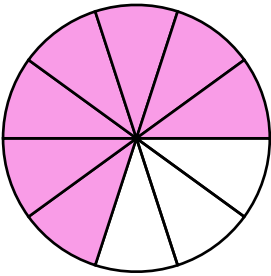
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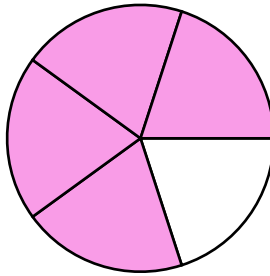
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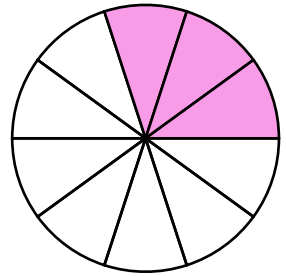
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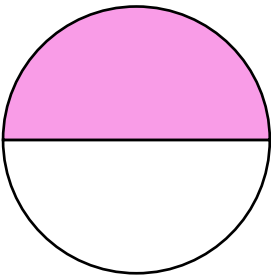
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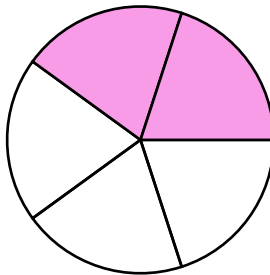
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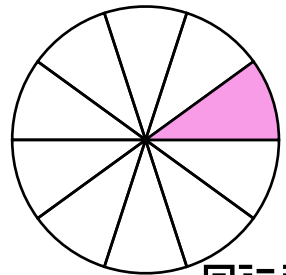
\_\_\_ : \_\_\_



\_\_\_ : \_\_\_



\_\_\_ : \_\_\_



\_\_\_ : \_\_\_



## Match Equivalent Ratios

 $1 : 2$  $5 : 10$  $2 : 3$  $20 : 100$  $5 : 4$  $4 : 6$  $1 : 5$  $10 : 8$  $9 : 10$  $18 : 20$  $1 : 3$  $15 : 20$  $2 : 1$  $3 : 9$  $2 : 3$  $10 : 5$  $3 : 4$  $6 : 9$  $1 : 2$  $2 : 4$  $3 : 7$  $9 : 21$  $1 : 3$  $2 : 6$  $3 : 1$  $20 : 5$  $3 : 4$  $9 : 3$  $4 : 1$  $30 : 40$  $1 : 2$  $50 : 100$  $1 : 4$  $25 : 100$  $1 : 5$  $20 : 100$  $1 : 10$  $5 : 100$  $1 : 20$  $10 : 100$  $2 : 5$  $40 : 100$  $3 : 5$  $60 : 100$  $4 : 5$  $80 : 100$  $3 : 4$  $75 : 100$  $2 : 4$  $50 : 100$  $2 : 5$  $15 : 50$  $1 : 5$  $35 : 50$  $3 : 10$  $10 : 50$  $8 : 10$  $20 : 50$  $7 : 10$  $40 : 50$ 

## Match Equivalent Ratios

$7 : 10$

$14 : 40$

$7 : 8$

$56 : 40$

$7 : 4$

$35 : 40$

$7 : 5$

$28 : 40$

$7 : 20$

$70 : 40$

$6 : 2$

$3 : 1$

$15 : 10$

$3 : 2$

$20 : 15$

$4 : 3$

$15 : 5$

$3 : 1$

$5 : 15$

$1 : 3$

$8 : 2$

$4 : 1$

$8 : 4$

$1 : 2$

$8 : 16$

$1 : 4$

$8 : 32$

$2 : 1$

$8 : 12$

$2 : 3$

$12 : 4$

$2 : 1$

$12 : 3$

$6 : 1$

$12 : 2$

$1 : 2$

$12 : 6$

$3 : 1$

$12 : 24$

$4 : 1$

$1000 : 4$

$200 : 1$

$1000 : 2$

$100 : 1$

$1000 : 5$

$10 : 1$

$1000 : 10$

$500 : 1$

$1000 : 100$

$250 : 1$

$1000 : 500$

$4 : 3$

$1000 : 200$

$2 : 1$

$1000 : 250$

$5 : 1$

$1000 : 750$

$4 : 1$

$1000 : 400$

$5 : 2$



Find the missing number in the equivalent ratios.

1)  $1 : 2 = 5 : \underline{\hspace{1cm}}$

2)  $2 : 3 = 4 : \underline{\hspace{1cm}}$

3)  $5 : 4 = \underline{\hspace{1cm}} : 8$

4)  $1 : 5 = 20 : \underline{\hspace{1cm}}$

5)  $9 : 10 = 18 : \underline{\hspace{1cm}}$

6)  $1 : 3 = 3 : \underline{\hspace{1cm}}$

7)  $2 : 1 = 10 : \underline{\hspace{1cm}}$

8)  $2 : 3 = 6 : \underline{\hspace{1cm}}$

9)  $3 : 4 = 15 : \underline{\hspace{1cm}}$

10)  $1 : 2 = 2 : \underline{\hspace{1cm}}$

11)  $3 : 7 = 9 : \underline{\hspace{1cm}}$

12)  $1 : 3 = 2 : \underline{\hspace{1cm}}$

13)  $3 : 1 = 9 : \underline{\hspace{1cm}}$

14)  $3 : 4 = 30 : \underline{\hspace{1cm}}$

15)  $4 : 1 = 20 : \underline{\hspace{1cm}}$

16)  $1 : 2 = \underline{\hspace{1cm}} : 100$

17)  $1 : 4 = \underline{\hspace{1cm}} : 100$

18)  $1 : 5 = \underline{\hspace{1cm}} : 100$

19)  $1 : 10 = \underline{\hspace{1cm}} : 100$

20)  $1 : 20 = \underline{\hspace{1cm}} : 100$

21)  $2 : 5 = \underline{\hspace{1cm}} : 100$

22)  $3 : 5 = \underline{\hspace{1cm}} : 100$

23)  $4 : 5 = \underline{\hspace{1cm}} : 100$

24)  $3 : 4 = \underline{\hspace{1cm}} : 100$

25)  $2 : 4 = \underline{\hspace{1cm}} : 100$



Find the missing number in the equivalent ratios.

1)  $2 : 5 = \underline{\quad} : 50$

2)  $1 : 5 = \underline{\quad} : 50$

3)  $3 : 10 = \underline{\quad} : 50$

4)  $8 : 10 = \underline{\quad} : 50$

5)  $7 : 10 = \underline{\quad} : 50$

6)  $7 : 10 = \underline{\quad} : 40$

7)  $7 : 8 = \underline{\quad} : 40$

8)  $7 : 4 = \underline{\quad} : 40$

9)  $7 : 5 = \underline{\quad} : 40$

10)  $7 : 20 = \underline{\quad} : 40$

11)  $6 : 2 = 3 : \underline{\quad}$

12)  $15 : 10 = 3 : \underline{\quad}$

13)  $20 : 15 = 4 : \underline{\quad}$

14)  $15 : 5 = 3 : \underline{\quad}$

15)  $5 : 15 = 1 : \underline{\quad}$

16)  $8 : 2 = 4 : \underline{\quad}$

17)  $8 : 4 = 2 : \underline{\quad}$

18)  $8 : 16 = 1 : \underline{\quad}$

19)  $8 : 32 = 1 : \underline{\quad}$

20)  $8 : 12 = 2 : \underline{\quad}$

21)  $12 : 4 = \underline{\quad} : 1$

22)  $12 : 3 = \underline{\quad} : 1$

23)  $12 : 2 = \underline{\quad} : 1$

24)  $12 : 6 = \underline{\quad} : 1$

25)  $12 : 24 = \underline{\quad} : 2$





Find the missing number in the equivalent ratios.

1)  $1000 : 4 = \underline{\hspace{1cm}} : 1$

2)  $1000 : 2 = \underline{\hspace{1cm}} : 1$

3)  $1000 : 5 = \underline{\hspace{1cm}} : 1$

4)  $1000 : 10 = \underline{\hspace{1cm}} : 1$

5)  $1000 : 100 = \underline{\hspace{1cm}} : 1$

6)  $1000 : 500 = \underline{\hspace{1cm}} : 1$

7)  $1000 : 200 = \underline{\hspace{1cm}} : 1$

8)  $1000 : 250 = \underline{\hspace{1cm}} : 1$

9)  $1000 : 750 = \underline{\hspace{1cm}} : 3$

10)  $1000 : 400 = \underline{\hspace{1cm}} : 2$

11)  $1 : 2 : 3 = \underline{\hspace{1cm}} : \underline{\hspace{1cm}} : 15$

12)  $3 : 5 : 7 = \underline{\hspace{1cm}} : 15 : \underline{\hspace{1cm}}$

13)  $6 : 3 : 1 = 30 : \underline{\hspace{1cm}} : \underline{\hspace{1cm}}$

14)  $\underline{\hspace{1cm}} : \underline{\hspace{1cm}} : 3 = 20 : 16 : 12$

15)  $2 : \underline{\hspace{1cm}} : \underline{\hspace{1cm}} = 6 : 15 : 21$

16)  $\underline{\hspace{1cm}} : 2 : 3 = 20 : \underline{\hspace{1cm}} : 15$

17)  $\underline{\hspace{1cm}} : 5 : 7 = 18 : 15 : \underline{\hspace{1cm}}$

18)  $6 : 3 : \underline{\hspace{1cm}} = 30 : \underline{\hspace{1cm}} : 25$

19)  $\underline{\hspace{1cm}} : 1 : 3 = 20 : \underline{\hspace{1cm}} : 12$

20)  $2 : 10 : \underline{\hspace{1cm}} = 6 : \underline{\hspace{1cm}} : 21$

21)  $\underline{\hspace{1cm}} : 1 : 2 = 100 : 50 : \underline{\hspace{1cm}}$

22)  $7 : 2 : \underline{\hspace{1cm}} = \underline{\hspace{1cm}} : 4 : 6$

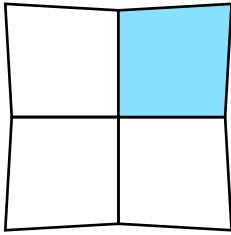
23)  $2 : 3 : \underline{\hspace{1cm}} = \underline{\hspace{1cm}} : 15 : 15$

24)  $1 : 3 : \underline{\hspace{1cm}} = \underline{\hspace{1cm}} : 15 : 25$

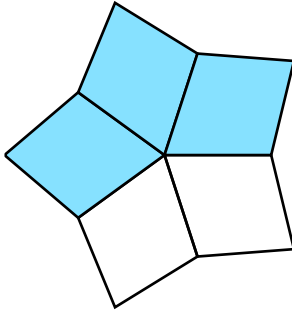
25)  $\underline{\hspace{1cm}} : 1 : 3 = 8 : \underline{\hspace{1cm}} : 12$



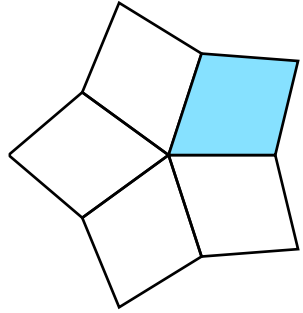
Write the filled percentage.



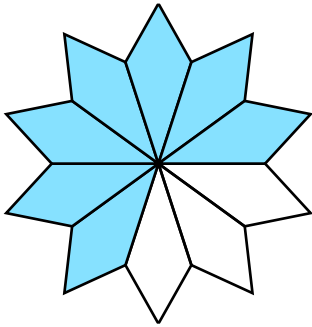
\_\_\_ %



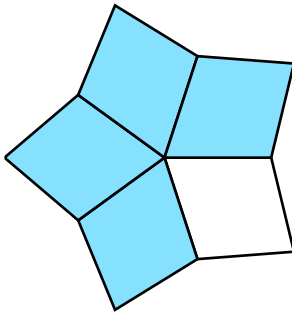
\_\_\_ %



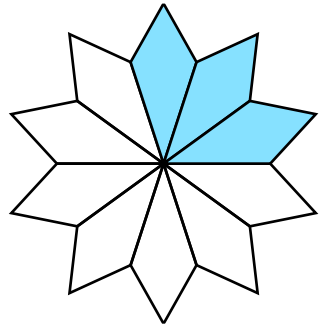
\_\_\_ %



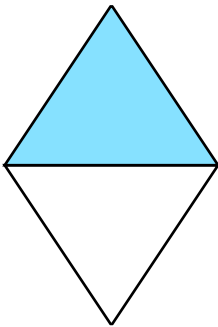
\_\_\_ %



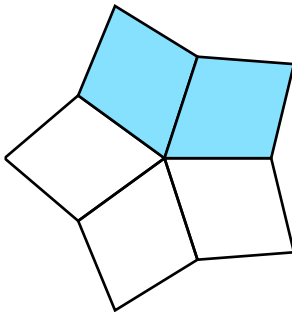
\_\_\_ %



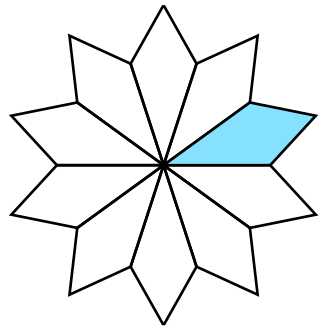
\_\_\_ %



\_\_\_ %



\_\_\_ %



\_\_\_ %



## Convert fraction to percentage

1)  $\frac{14}{100} = \quad \%$

2)  $\frac{26}{100} = \quad \%$

3)  $\frac{67}{100} = \quad \%$

4)  $\frac{\quad}{100} = 24 \%$

5)  $\frac{\quad}{100} = 91 \%$

6)  $\frac{7}{10} = \quad \%$

7)  $\frac{3}{10} = \quad \%$

8)  $\frac{6.3}{10} = \quad \%$

9)  $\frac{2.9}{10} = \quad \%$

10)  $\frac{4.1}{10} = \quad \%$

11)  $\frac{7}{50} = \quad \%$

12)  $\frac{31}{50} = \quad \%$

13)  $\frac{16}{50} = \quad \%$

14)  $\frac{11}{50} = \quad \%$

15)  $\frac{29}{50} = \quad \%$

16)  $\frac{\quad}{50} = 100 \%$

17)  $\frac{\quad}{50} = 50 \%$

18)  $\frac{\quad}{50} = 40 \%$

19)  $\frac{\quad}{50} = 80 \%$

20)  $\frac{\quad}{50} = 66 \%$

21)  $\frac{7}{1000} = \quad \%$

22)  $\frac{319}{1000} = \quad \%$

23)  $\frac{516}{1000} = \quad \%$

24)  $\frac{911}{1000} = \quad \%$

25)  $\frac{249}{1000} = \quad \%$



## Convert fraction to percentage

1)  $\frac{\quad}{1000} = 4 \%$       2)  $\frac{\quad}{1000} = 45 \%$       3)  $\frac{\quad}{1000} = 25.4 \%$

4)  $\frac{\quad}{1000} = 66.6 \%$       5)  $\frac{\quad}{1000} = 87.6 \%$       6)  $\frac{7}{20} = \quad \%$

7)  $\frac{5}{20} = \quad \%$       8)  $\frac{11}{20} = \quad \%$       9)  $\frac{1}{20} = \quad \%$

10)  $\frac{19}{20} = \quad \%$       11)  $\frac{\quad}{20} = 100 \%$       12)  $\frac{\quad}{20} = 50 \%$

13)  $\frac{\quad}{20} = 40 \%$       14)  $\frac{\quad}{20} = 80 \%$       15)  $\frac{\quad}{20} = 55 \%$

16)  $\frac{7}{25} = \quad \%$       17)  $\frac{5}{25} = \quad \%$       18)  $\frac{11}{25} = \quad \%$

19)  $\frac{1}{25} = \quad \%$       20)  $\frac{19}{25} = \quad \%$       21)  $\frac{\quad}{25} = 100 \%$

22)  $\frac{\quad}{25} = 24 \%$       23)  $\frac{\quad}{25} = 40 \%$       24)  $\frac{\quad}{25} = 80 \%$

25)  $\frac{\quad}{25} = 72 \%$

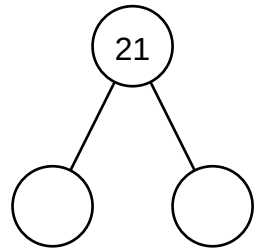
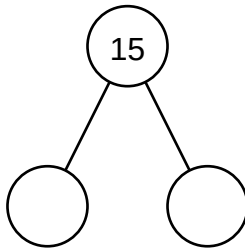
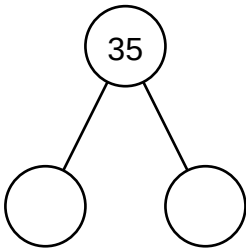
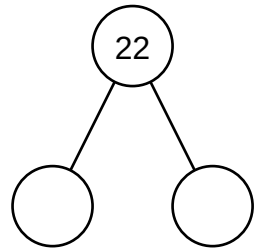
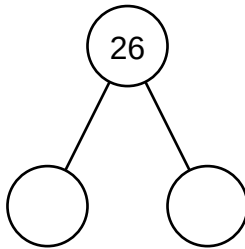
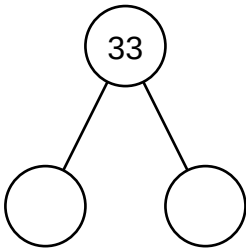
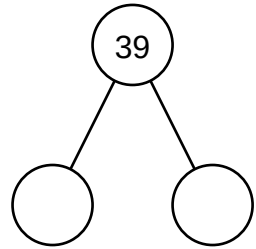
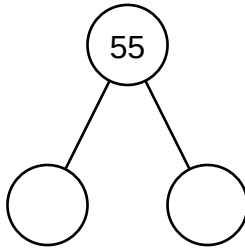
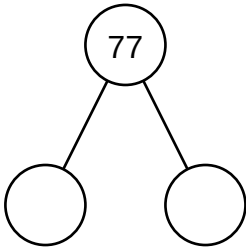
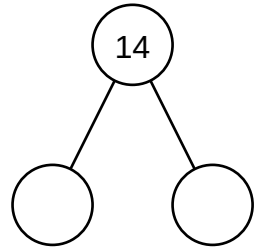
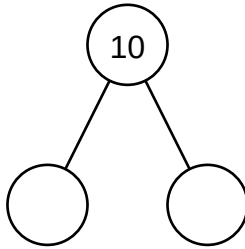
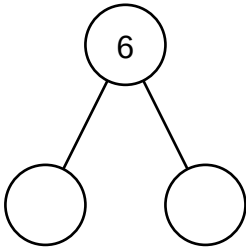


Find the percentage of a number

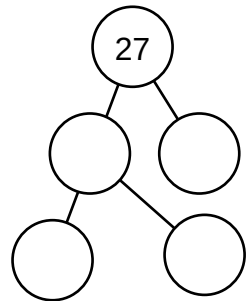
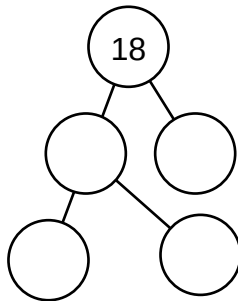
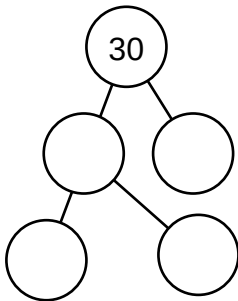
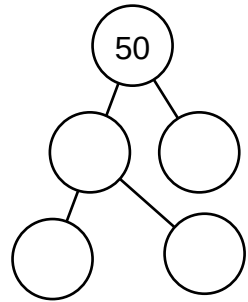
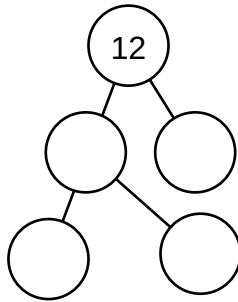
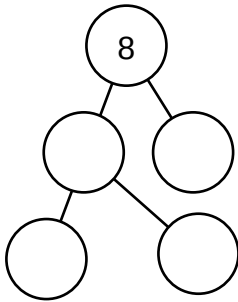
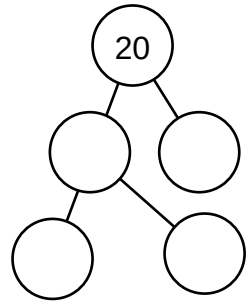
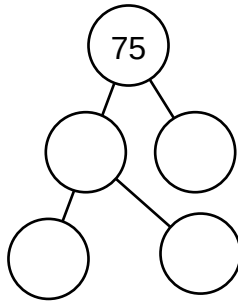
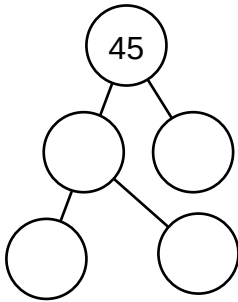
- |                   |                   |                   |
|-------------------|-------------------|-------------------|
| 1) 50 % of 100 =  | 2) 25 % of 100 =  | 3) 50 % of 10 =   |
| 4) 20 % of 10 =   | 5) 20 % of 40 =   | 6) 25 % of 60 =   |
| 7) 50 % of 200 =  | 8) 50 % of 48 =   | 9) 50 % of 24 =   |
| 10) 50 % of 70 =  | 11) 50 % of 90 =  | 12) 50 % of 36 =  |
| 13) 25 % of 200 = | 14) 25 % of 48 =  | 15) 25 % of 24 =  |
| 16) 25 % of 60 =  | 17) 25 % of 96 =  | 18) 25 % of 36 =  |
| 19) 20 % of 200 = | 20) 20 % of 50 =  | 21) 20 % of 25 =  |
| 22) 20 % of 75 =  | 23) 20 % of 60 =  | 24) 20 % of 40 =  |
| 25) 70 % of 100 = | 26) 70 % of 200 = | 27) 50 % of 30 =  |
| 28) 20 % of 30 =  | 29) 15 % of 100 = | 30) 50 % of 50 =  |
| 31) 25 % of 36 =  | 32) 25 % of 24 =  | 33) 25 % of 200 = |
| 34) 25 % of 104 = | 35) 25 % of 48 =  | 36) 20 % of 20 =  |
| 37) 20 % of 80 =  | 38) 20 % of 50 =  | 39) 20 % of 200 = |
| 40) 20 % of 15 =  |                   |                   |



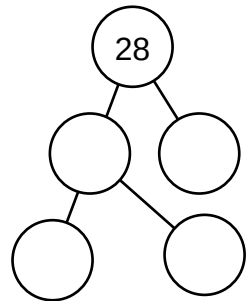
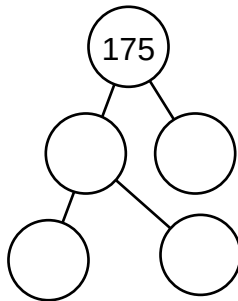
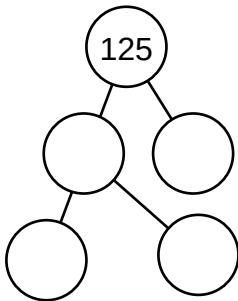
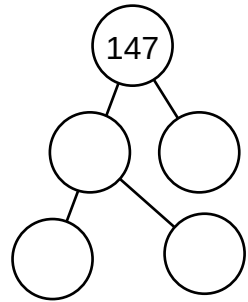
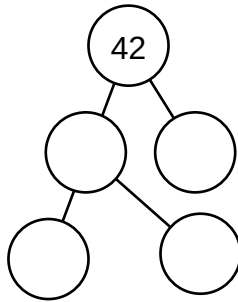
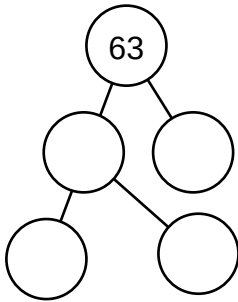
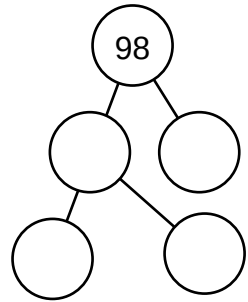
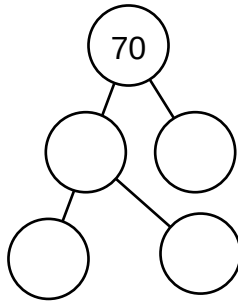
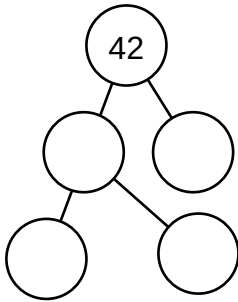
Complete the factor tree as product of two numbers.



Complete the factor tree.

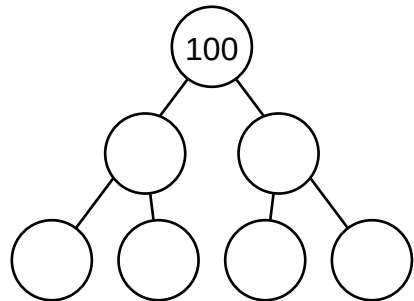
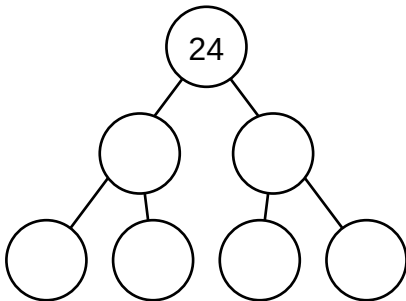
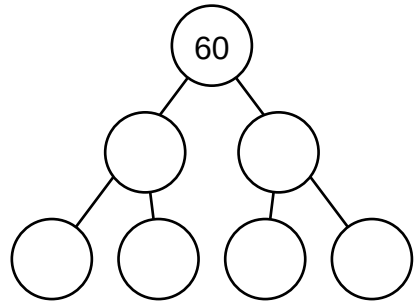
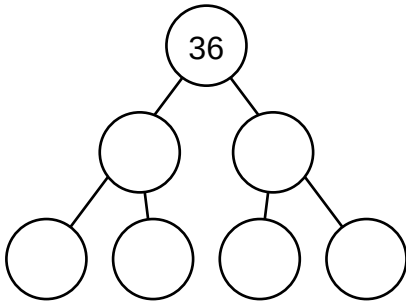
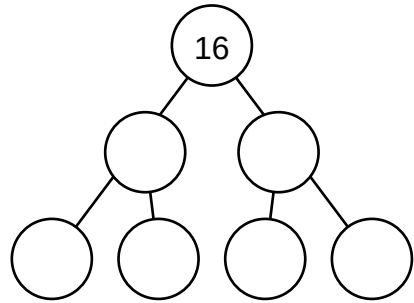
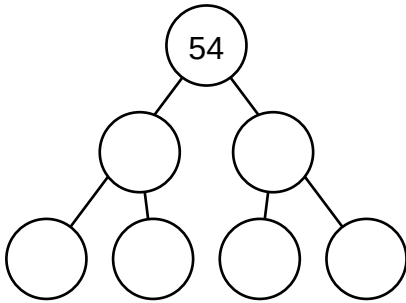


Complete the factor tree.

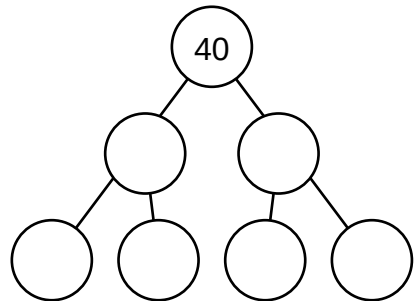
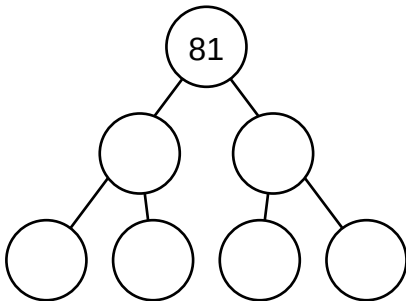
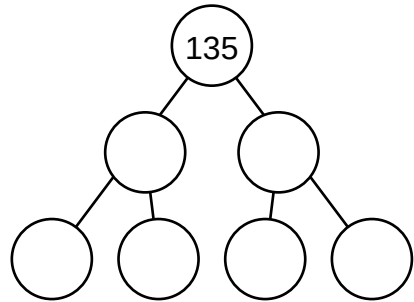
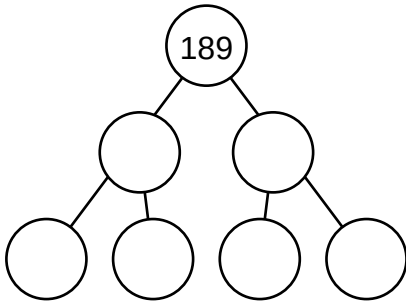
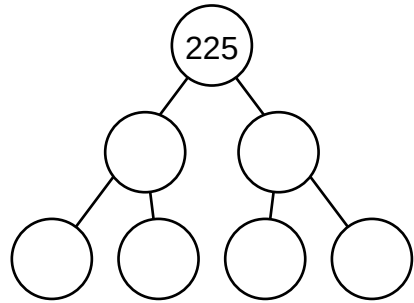
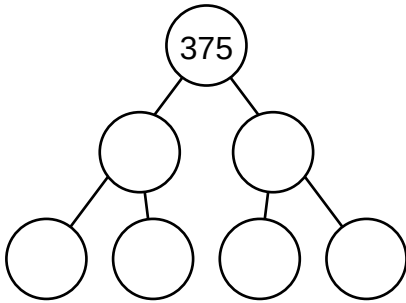




Complete the factor tree.



Complete the factor tree.



## Subtraction

1)  $12 - 67 = \underline{\hspace{2cm}}$

2)  $44 - 87 = \underline{\hspace{2cm}}$

3)  $41 - 55 = \underline{\hspace{2cm}}$

4)  $24 - 55 = \underline{\hspace{2cm}}$

5)  $24 - 95 = \underline{\hspace{2cm}}$

6)  $32 - 69 = \underline{\hspace{2cm}}$

7)  $23 - 67 = \underline{\hspace{2cm}}$

8)  $11 - 96 = \underline{\hspace{2cm}}$

9)  $22 - 69 = \underline{\hspace{2cm}}$

10)  $43 - 77 = \underline{\hspace{2cm}}$

11)  $32 - 85 = \underline{\hspace{2cm}}$

12)  $44 - 89 = \underline{\hspace{2cm}}$

13)  $24 - 57 = \underline{\hspace{2cm}}$

14)  $41 - 79 = \underline{\hspace{2cm}}$

15)  $34 - 86 = \underline{\hspace{2cm}}$

16)  $13 - 97 = \underline{\hspace{2cm}}$

17)  $43 - 66 = \underline{\hspace{2cm}}$

18)  $14 - 79 = \underline{\hspace{2cm}}$

19)  $22 - 58 = \underline{\hspace{2cm}}$

20)  $13 - 59 = \underline{\hspace{2cm}}$

21)  $21 - 75 = \underline{\hspace{2cm}}$

22)  $22 - 97 = \underline{\hspace{2cm}}$

23)  $31 - 95 = \underline{\hspace{2cm}}$

24)  $23 - 85 = \underline{\hspace{2cm}}$

25)  $41 - 67 = \underline{\hspace{2cm}}$

26)  $24 - 87 = \underline{\hspace{2cm}}$

27)  $44 - 57 = \underline{\hspace{2cm}}$

28)  $12 - 68 = \underline{\hspace{2cm}}$

29)  $41 - 66 = \underline{\hspace{2cm}}$

30)  $44 - 85 = \underline{\hspace{2cm}}$

31)  $22 - 99 = \underline{\hspace{2cm}}$

32)  $31 - 89 = \underline{\hspace{2cm}}$

33)  $14 - 87 = \underline{\hspace{2cm}}$

34)  $23 - 97 = \underline{\hspace{2cm}}$



## Simplify

1)  $3 + (4 - 6) = \underline{\hspace{2cm}}$

2)  $4 + (4 - 9) = \underline{\hspace{2cm}}$

3)  $1 + (4 - 8) = \underline{\hspace{2cm}}$

4)  $2 + (6 - 1) = \underline{\hspace{2cm}}$

5)  $3 + (2 - 5) = \underline{\hspace{2cm}}$

6)  $4 + (6 - 3) = \underline{\hspace{2cm}}$

7)  $1 + (1 - 9) = \underline{\hspace{2cm}}$

8)  $3 + (9 - 3) = \underline{\hspace{2cm}}$

9)  $1 + (8 - 1) = \underline{\hspace{2cm}}$

10)  $3 + (4 - 5) = \underline{\hspace{2cm}}$

11)  $1 + (9 - 1) = \underline{\hspace{2cm}}$

12)  $1 + (8 - 4) = \underline{\hspace{2cm}}$

13)  $1 + (6 - 4) = \underline{\hspace{2cm}}$

14)  $4 + (4 - 5) = \underline{\hspace{2cm}}$

15)  $2 + (3 - 9) = \underline{\hspace{2cm}}$

16)  $1 + (4 - 7) = \underline{\hspace{2cm}}$

17)  $2 + (1 - 7) = \underline{\hspace{2cm}}$

18)  $3 + (8 - 3) = \underline{\hspace{2cm}}$

19)  $3 + (8 - 1) = \underline{\hspace{2cm}}$

20)  $1 + (1 - 9) = \underline{\hspace{2cm}}$

21)  $3 + (6 - 3) = \underline{\hspace{2cm}}$

22)  $1 + (1 - 8) = \underline{\hspace{2cm}}$

23)  $2 + (5 - 3) = \underline{\hspace{2cm}}$

24)  $1 + (2 - 8) = \underline{\hspace{2cm}}$

25)  $4 + (4 - 8) = \underline{\hspace{2cm}}$

26)  $2 + (6 - 4) = \underline{\hspace{2cm}}$

27)  $1 + (1 - 8) = \underline{\hspace{2cm}}$

28)  $4 + (1 - 7) = \underline{\hspace{2cm}}$

29)  $2 + (2 - 8) = \underline{\hspace{2cm}}$

30)  $4 + (8 - 1) = \underline{\hspace{2cm}}$

31)  $3 + (9 - 4) = \underline{\hspace{2cm}}$

32)  $4 + (9 - 1) = \underline{\hspace{2cm}}$

33)  $1 + (5 - 4) = \underline{\hspace{2cm}}$

34)  $2 + (7 - 3) = \underline{\hspace{2cm}}$



## Simplify

1)  $-4 - (-1) = \underline{\hspace{2cm}}$

2)  $-4 - 2 = \underline{\hspace{2cm}}$

3)  $-3 - (-1) = \underline{\hspace{2cm}}$

4)  $-4 - 2 = \underline{\hspace{2cm}}$

5)  $-1 - 3 = \underline{\hspace{2cm}}$

6)  $-2 - 3 = \underline{\hspace{2cm}}$

7)  $-4 - 2 = \underline{\hspace{2cm}}$

8)  $-2 - (-1) = \underline{\hspace{2cm}}$

9)  $-2 - 4 = \underline{\hspace{2cm}}$

10)  $-4 - (-3) = \underline{\hspace{2cm}}$

11)  $-4 - 4 = \underline{\hspace{2cm}}$

12)  $-2 - (-3) = \underline{\hspace{2cm}}$

13)  $-4 - (-1) = \underline{\hspace{2cm}}$

14)  $-3 - 4 = \underline{\hspace{2cm}}$

15)  $-2 - (-2) = \underline{\hspace{2cm}}$

16)  $-1 - (-1) = \underline{\hspace{2cm}}$

17)  $-4 - (-3) = \underline{\hspace{2cm}}$

18)  $-1 - 1 = \underline{\hspace{2cm}}$

19)  $-1 - 2 = \underline{\hspace{2cm}}$

20)  $-4 - 4 = \underline{\hspace{2cm}}$

21)  $-3 - (-3) = \underline{\hspace{2cm}}$

22)  $-1 - (-4) = \underline{\hspace{2cm}}$

23)  $-3 - 3 = \underline{\hspace{2cm}}$

24)  $-2 - (-4) = \underline{\hspace{2cm}}$

25)  $-2 - 1 = \underline{\hspace{2cm}}$

26)  $-1 - (-3) = \underline{\hspace{2cm}}$

27)  $-4 - (-2) = \underline{\hspace{2cm}}$

28)  $-1 - 3 = \underline{\hspace{2cm}}$

29)  $-4 - 1 = \underline{\hspace{2cm}}$

30)  $-3 - (-2) = \underline{\hspace{2cm}}$

31)  $-4 - 1 = \underline{\hspace{2cm}}$

32)  $-2 - 3 = \underline{\hspace{2cm}}$

33)  $-3 - (-1) = \underline{\hspace{2cm}}$

34)  $-4 - (-1) = \underline{\hspace{2cm}}$



## Simplify

- |                                                    |                                                    |
|----------------------------------------------------|----------------------------------------------------|
| 1) $(6 - 1) - (7 - 1) = \underline{\hspace{2cm}}$  | 2) $(7 - 4) - (9 - 2) = \underline{\hspace{2cm}}$  |
| 3) $(8 - 2) - (7 - 1) = \underline{\hspace{2cm}}$  | 4) $(9 - 3) - (5 - 2) = \underline{\hspace{2cm}}$  |
| 5) $(6 - 1) - (6 - 3) = \underline{\hspace{2cm}}$  | 6) $(8 - 1) - (6 - 3) = \underline{\hspace{2cm}}$  |
| 7) $(5 - 3) - (5 - 1) = \underline{\hspace{2cm}}$  | 8) $(7 - 1) - (6 - 1) = \underline{\hspace{2cm}}$  |
| 9) $(9 - 3) - (5 - 4) = \underline{\hspace{2cm}}$  | 10) $(5 - 3) - (6 - 1) = \underline{\hspace{2cm}}$ |
| 11) $(6 - 4) - (8 - 1) = \underline{\hspace{2cm}}$ | 12) $(9 - 1) - (5 - 3) = \underline{\hspace{2cm}}$ |
| 13) $(6 - 4) - (9 - 1) = \underline{\hspace{2cm}}$ | 14) $(5 - 4) - (9 - 1) = \underline{\hspace{2cm}}$ |
| 15) $(6 - 3) - (7 - 4) = \underline{\hspace{2cm}}$ | 16) $(9 - 1) - (7 - 2) = \underline{\hspace{2cm}}$ |
| 17) $(8 - 4) - (7 - 1) = \underline{\hspace{2cm}}$ | 18) $(2 - 6) - (3 - 9) = \underline{\hspace{2cm}}$ |
| 19) $(2 - 5) - (2 - 8) = \underline{\hspace{2cm}}$ | 20) $(3 - 6) - (2 - 5) = \underline{\hspace{2cm}}$ |
| 21) $(4 - 9) - (3 - 6) = \underline{\hspace{2cm}}$ | 22) $(3 - 5) - (3 - 6) = \underline{\hspace{2cm}}$ |
| 23) $(2 - 8) - (3 - 6) = \underline{\hspace{2cm}}$ | 24) $(4 - 9) - (4 - 5) = \underline{\hspace{2cm}}$ |
| 25) $(4 - 7) - (3 - 5) = \underline{\hspace{2cm}}$ | 26) $(4 - 5) - (3 - 8) = \underline{\hspace{2cm}}$ |
| 27) $(2 - 9) - (4 - 6) = \underline{\hspace{2cm}}$ | 28) $(3 - 6) - (1 - 9) = \underline{\hspace{2cm}}$ |
| 29) $(1 - 9) - (3 - 5) = \underline{\hspace{2cm}}$ | 30) $(1 - 9) - (4 - 5) = \underline{\hspace{2cm}}$ |
| 31) $(4 - 5) - (1 - 9) = \underline{\hspace{2cm}}$ | 32) $(4 - 5) - (2 - 9) = \underline{\hspace{2cm}}$ |
| 33) $(1 - 6) - (1 - 7) = \underline{\hspace{2cm}}$ | 34) $(3 - 8) - (1 - 9) = \underline{\hspace{2cm}}$ |



## Simplify

- |                                                    |                                                    |
|----------------------------------------------------|----------------------------------------------------|
| 1) $(1 - 7) - (5 - 7) = \underline{\hspace{2cm}}$  | 2) $(9 - 3) - (4 - 1) = \underline{\hspace{2cm}}$  |
| 3) $(4 - 6) - (6 - 3) = \underline{\hspace{2cm}}$  | 4) $(8 - 2) - (1 - 4) = \underline{\hspace{2cm}}$  |
| 5) $(5 - 3) - (5 - 9) = \underline{\hspace{2cm}}$  | 6) $(2 - 2) - (6 - 4) = \underline{\hspace{2cm}}$  |
| 7) $(5 - 9) - (5 - 2) = \underline{\hspace{2cm}}$  | 8) $(2 - 6) - (1 - 6) = \underline{\hspace{2cm}}$  |
| 9) $(2 - 5) - (4 - 1) = \underline{\hspace{2cm}}$  | 10) $(7 - 2) - (9 - 4) = \underline{\hspace{2cm}}$ |
| 11) $(9 - 3) - (8 - 7) = \underline{\hspace{2cm}}$ | 12) $(3 - 8) - (1 - 8) = \underline{\hspace{2cm}}$ |
| 13) $(9 - 9) - (7 - 6) = \underline{\hspace{2cm}}$ | 14) $(3 - 2) - (5 - 1) = \underline{\hspace{2cm}}$ |
| 15) $(9 - 4) - (1 - 6) = \underline{\hspace{2cm}}$ | 16) $(8 - 2) - (5 - 6) = \underline{\hspace{2cm}}$ |
| 17) $(6 - 2) - (1 - 9) = \underline{\hspace{2cm}}$ | 18) $(1 - 7) - (5 - 2) = \underline{\hspace{2cm}}$ |
| 19) $(5 - 6) - (8 - 1) = \underline{\hspace{2cm}}$ | 20) $(1 - 3) - (3 - 9) = \underline{\hspace{2cm}}$ |
| 21) $(2 - 8) - (7 - 1) = \underline{\hspace{2cm}}$ | 22) $(3 - 6) - (8 - 1) = \underline{\hspace{2cm}}$ |
| 23) $(9 - 2) - (2 - 9) = \underline{\hspace{2cm}}$ | 24) $(9 - 1) - (1 - 4) = \underline{\hspace{2cm}}$ |
| 25) $(2 - 7) - (8 - 2) = \underline{\hspace{2cm}}$ | 26) $(4 - 3) - (1 - 8) = \underline{\hspace{2cm}}$ |
| 27) $(8 - 1) - (1 - 9) = \underline{\hspace{2cm}}$ | 28) $(1 - 9) - (8 - 2) = \underline{\hspace{2cm}}$ |
| 29) $(3 - 8) - (9 - 1) = \underline{\hspace{2cm}}$ | 30) $(8 - 1) - (3 - 9) = \underline{\hspace{2cm}}$ |
| 31) $(1 - 5) - (6 - 7) = \underline{\hspace{2cm}}$ | 32) $(8 - 2) - (3 - 1) = \underline{\hspace{2cm}}$ |
| 33) $(3 - 5) - (7 - 2) = \underline{\hspace{2cm}}$ | 34) $(8 - 7) - (6 - 7) = \underline{\hspace{2cm}}$ |



## Multiply

1)  $-3 \times 3 =$  \_\_\_\_\_

2)  $-1 \times -9 =$  \_\_\_\_\_

3)  $1 \times -1 =$  \_\_\_\_\_

4)  $4 \times -4 =$  \_\_\_\_\_

5)  $-3 \times -8 =$  \_\_\_\_\_

6)  $-9 \times 5 =$  \_\_\_\_\_

7)  $-5 \times 8 =$  \_\_\_\_\_

8)  $1 \times -9 =$  \_\_\_\_\_

9)  $-7 \times 1 =$  \_\_\_\_\_

10)  $5 \times -3 =$  \_\_\_\_\_

11)  $-3 \times -2 =$  \_\_\_\_\_

12)  $6 \times -6 =$  \_\_\_\_\_

13)  $-7 \times -3 =$  \_\_\_\_\_

14)  $-8 \times 2 =$  \_\_\_\_\_

15)  $2 \times -1 =$  \_\_\_\_\_

16)  $-7 \times -9 =$  \_\_\_\_\_

17)  $-7 \times -1 =$  \_\_\_\_\_

18)  $-6 \times 4 =$  \_\_\_\_\_

19)  $-1 \times -2 =$  \_\_\_\_\_

20)  $-3 \times -4 =$  \_\_\_\_\_

21)  $-2 \times -4 =$  \_\_\_\_\_

22)  $-2 \times 3 =$  \_\_\_\_\_

23)  $2 \times -5 =$  \_\_\_\_\_

24)  $-4 \times 2 =$  \_\_\_\_\_

25)  $1 \times -3 =$  \_\_\_\_\_

26)  $-2 \times 2 =$  \_\_\_\_\_

27)  $6 \times -9 =$  \_\_\_\_\_

28)  $3 \times -7 =$  \_\_\_\_\_

29)  $5 \times -9 =$  \_\_\_\_\_

30)  $-8 \times 9 =$  \_\_\_\_\_

31)  $-8 \times -8 =$  \_\_\_\_\_

32)  $-5 \times 6 =$  \_\_\_\_\_

33)  $-5 \times -6 =$  \_\_\_\_\_

34)  $-4 \times -9 =$  \_\_\_\_\_





## Division

1)  $-96 \div 4 = \underline{\hspace{2cm}}$

2)  $-42 \div 6 = \underline{\hspace{2cm}}$

3)  $-32 \div 8 = \underline{\hspace{2cm}}$

4)  $-72 \div 8 = \underline{\hspace{2cm}}$

5)  $72 \div -2 = \underline{\hspace{2cm}}$

6)  $-75 \div 3 = \underline{\hspace{2cm}}$

7)  $-21 \div -3 = \underline{\hspace{2cm}}$

8)  $-81 \div -3 = \underline{\hspace{2cm}}$

9)  $-66 \div 3 = \underline{\hspace{2cm}}$

10)  $60 \div -3 = \underline{\hspace{2cm}}$

11)  $64 \div -2 = \underline{\hspace{2cm}}$

12)  $-48 \div -4 = \underline{\hspace{2cm}}$

13)  $96 \div -6 = \underline{\hspace{2cm}}$

14)  $90 \div -5 = \underline{\hspace{2cm}}$

15)  $51 \div -3 = \underline{\hspace{2cm}}$

16)  $72 \div -3 = \underline{\hspace{2cm}}$

17)  $-78 \div -6 = \underline{\hspace{2cm}}$

18)  $-24 \div 4 = \underline{\hspace{2cm}}$

19)  $40 \div -8 = \underline{\hspace{2cm}}$

20)  $-72 \div -2 = \underline{\hspace{2cm}}$

21)  $-10 \div -5 = \underline{\hspace{2cm}}$

22)  $-72 \div -9 = \underline{\hspace{2cm}}$

23)  $-86 \div 2 = \underline{\hspace{2cm}}$

24)  $-98 \div -7 = \underline{\hspace{2cm}}$

25)  $-91 \div 7 = \underline{\hspace{2cm}}$

26)  $56 \div -2 = \underline{\hspace{2cm}}$

27)  $-36 \div -6 = \underline{\hspace{2cm}}$

28)  $40 \div -4 = \underline{\hspace{2cm}}$

29)  $18 \div -2 = \underline{\hspace{2cm}}$

30)  $-55 \div -5 = \underline{\hspace{2cm}}$

31)  $-45 \div -9 = \underline{\hspace{2cm}}$

32)  $-33 \div 3 = \underline{\hspace{2cm}}$

33)  $-32 \div 4 = \underline{\hspace{2cm}}$

34)  $-76 \div 4 = \underline{\hspace{2cm}}$



## Simplify

1)  $-5 \times 2 \div 5 = \underline{\hspace{2cm}}$

2)  $8 \times -8 \div 4 = \underline{\hspace{2cm}}$

3)  $-1 \times 9 \div 9 = \underline{\hspace{2cm}}$

4)  $-7 \times 4 \div 4 = \underline{\hspace{2cm}}$

5)  $-5 \times -3 \div 5 = \underline{\hspace{2cm}}$

6)  $8 \times -3 \div 6 = \underline{\hspace{2cm}}$

7)  $-9 \times 7 \div 7 = \underline{\hspace{2cm}}$

8)  $8 \times -4 \div 4 = \underline{\hspace{2cm}}$

9)  $-5 \times 8 \div 4 = \underline{\hspace{2cm}}$

10)  $-7 \times -8 \div 8 = \underline{\hspace{2cm}}$

11)  $6 \times -6 \div 2 = \underline{\hspace{2cm}}$

12)  $9 \times -6 \div 9 = \underline{\hspace{2cm}}$

13)  $-9 \times -2 \div 3 = \underline{\hspace{2cm}}$

14)  $6 \times -7 \div 3 = \underline{\hspace{2cm}}$

15)  $-1 \times -4 \div 4 = \underline{\hspace{2cm}}$

16)  $-8 \times -6 \div 2 = \underline{\hspace{2cm}}$

17)  $-5 \times 8 \div 5 = \underline{\hspace{2cm}}$

18)  $4 \times -2 \div 8 = \underline{\hspace{2cm}}$

19)  $-5 \times 4 \div 5 = \underline{\hspace{2cm}}$

20)  $-8 \times 3 \div 4 = \underline{\hspace{2cm}}$

21)  $-8 \times 9 \div 2 = \underline{\hspace{2cm}}$

22)  $-4 \times 3 \div 4 = \underline{\hspace{2cm}}$

23)  $4 \times -5 \div 4 = \underline{\hspace{2cm}}$

24)  $-8 \times 7 \div 4 = \underline{\hspace{2cm}}$

25)  $-8 \times -8 \div 4 = \underline{\hspace{2cm}}$

26)  $9 \times -9 \div 3 = \underline{\hspace{2cm}}$

27)  $-5 \times 8 \div 8 = \underline{\hspace{2cm}}$

28)  $-5 \times -7 \div 7 = \underline{\hspace{2cm}}$

29)  $-8 \times -8 \div 2 = \underline{\hspace{2cm}}$

30)  $-8 \times -2 \div 8 = \underline{\hspace{2cm}}$

31)  $6 \times -2 \div 4 = \underline{\hspace{2cm}}$

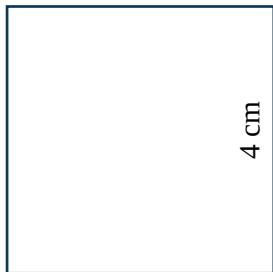
32)  $5 \times -8 \div 4 = \underline{\hspace{2cm}}$

33)  $4 \times -3 \div 6 = \underline{\hspace{2cm}}$

34)  $-8 \times -4 \div 4 = \underline{\hspace{2cm}}$

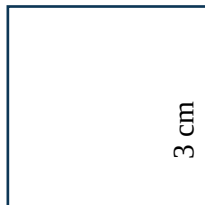


Sides of squares are given. Find area (A) and perimeter(P).



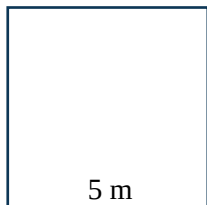
A =

P =



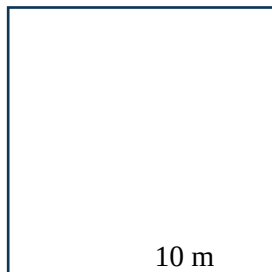
A =

P =



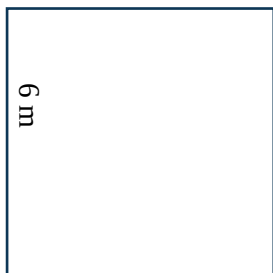
A =

P =



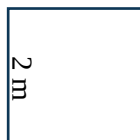
A =

P =



A =

P =

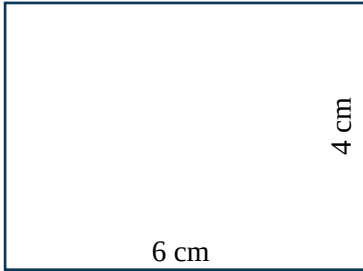


A =

P =

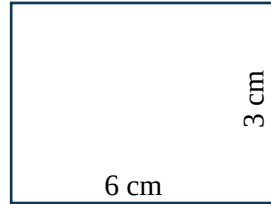


Lengths and breadths of rectangles are given. Find area (A) and perimeter(P).



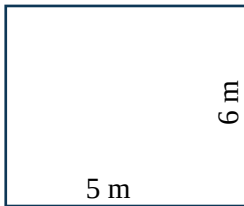
A =

P =



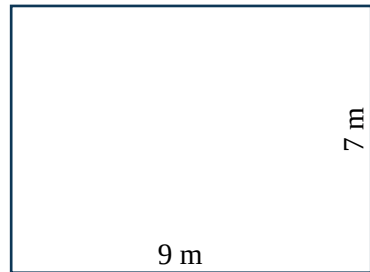
A =

P =



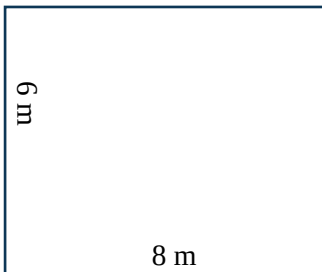
A =

P =



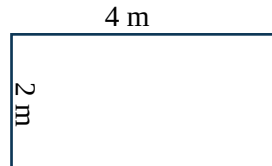
A =

P =



A =

P =

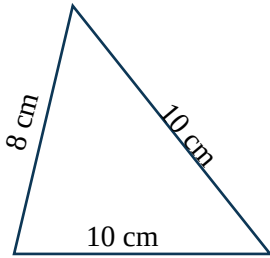


A =

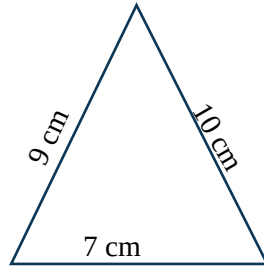
P =



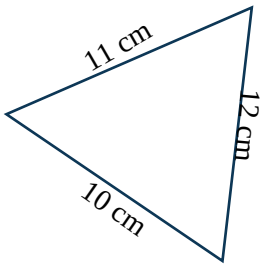
Find the perimeter of the below triangles.



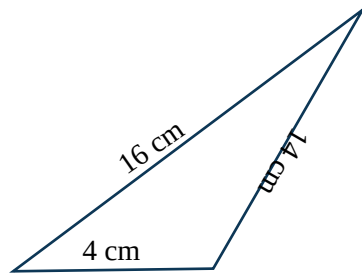
P =



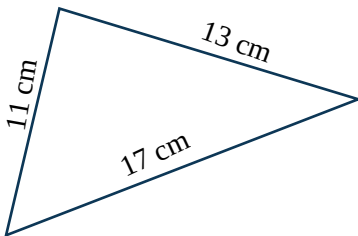
P =



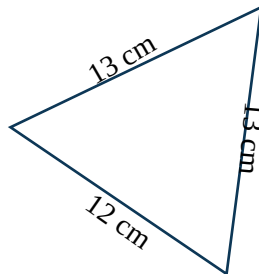
P =



P =



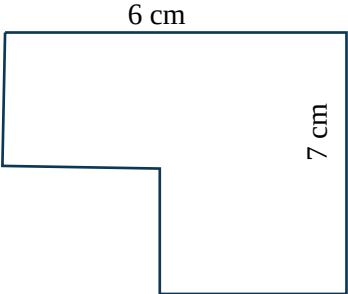
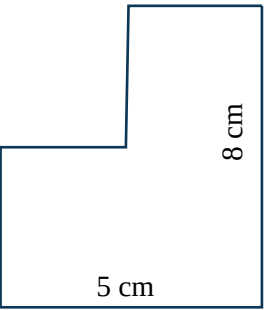
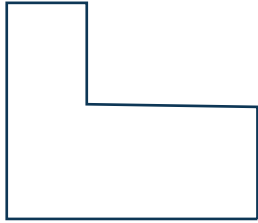
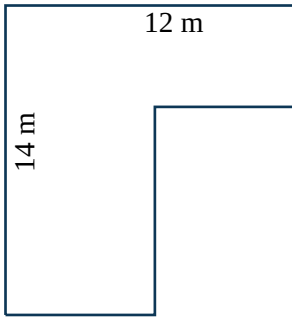
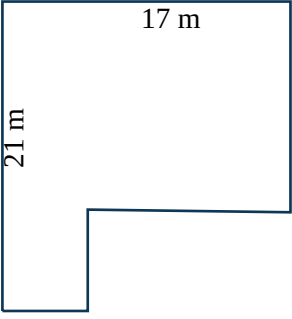
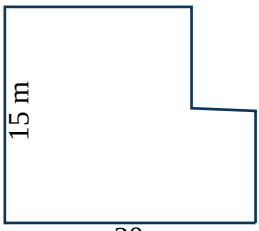
P =



P =

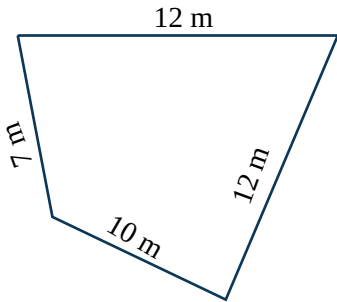


Find the perimeter of the below closed shapes where all angles are  $90^\circ$

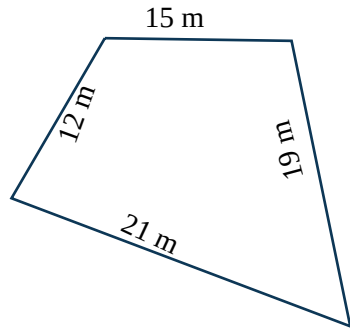
|                                                                                                |                                                                                                |
|------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|
|  <p>P =</p>   |  <p>P =</p>   |
|  <p>P =</p>   |  <p>P =</p>   |
|  <p>P =</p> |  <p>P =</p> |



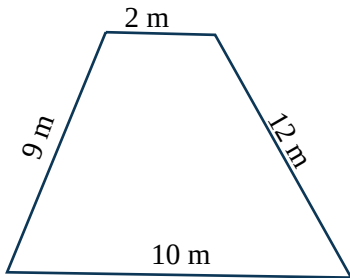
Find the perimeter of the below quadrilaterals.



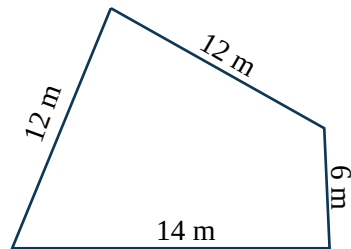
P =



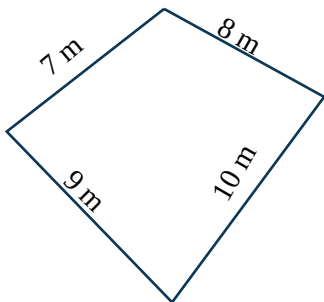
P =



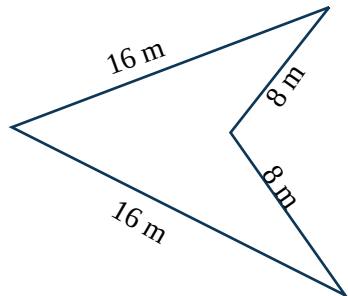
P =



P =



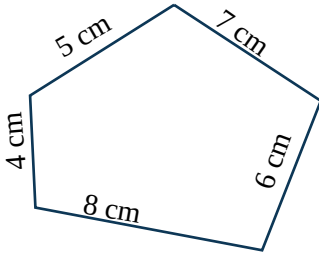
P =



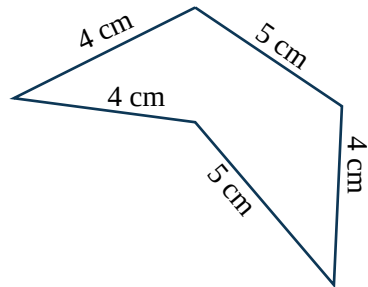
P =



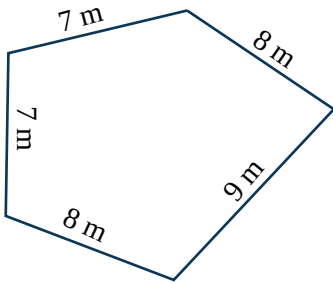
Find the perimeter of the below polygons.



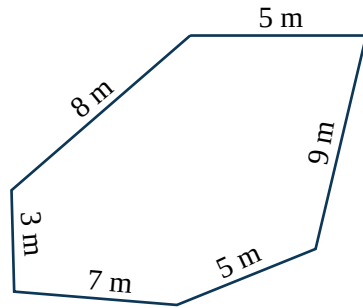
P =



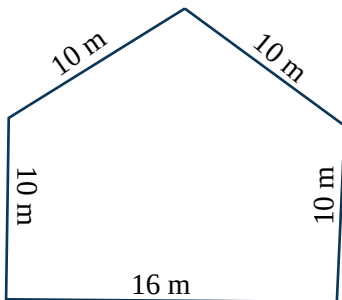
P =



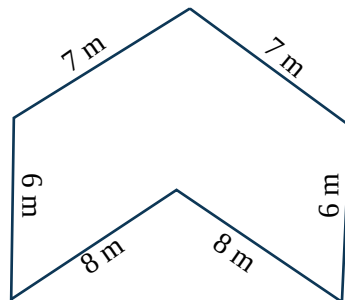
P =



P =



P =

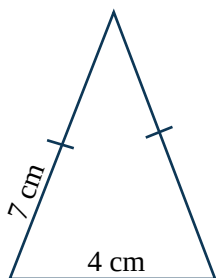


P =

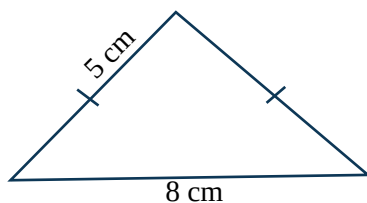




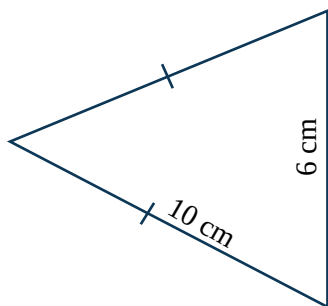
Find the perimeter of the below isosceles triangles.



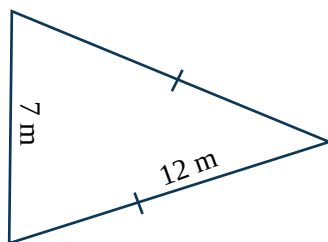
P =



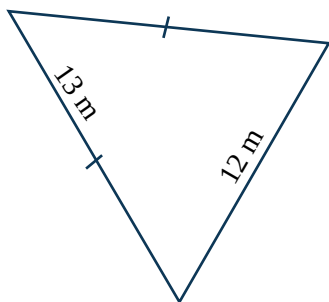
P =



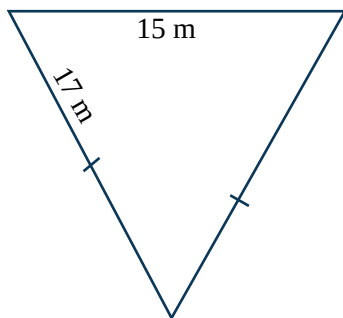
P =



P =



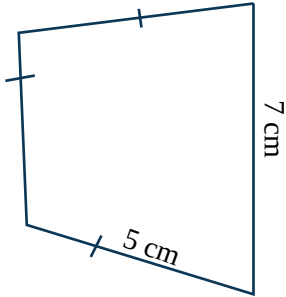
P =



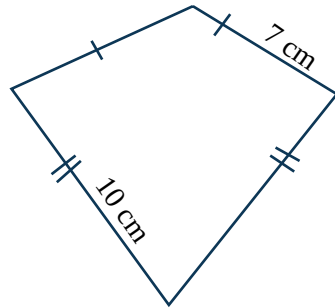
P =



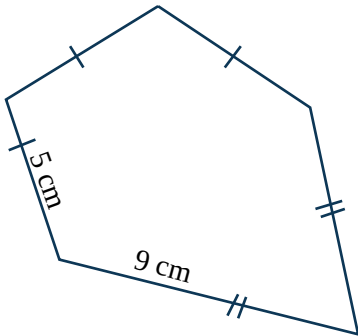
Find the perimeter of the below polygons.



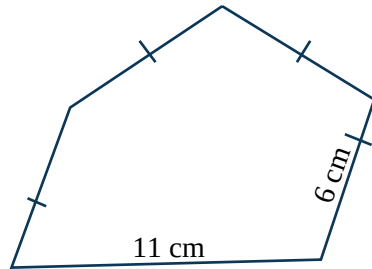
P =



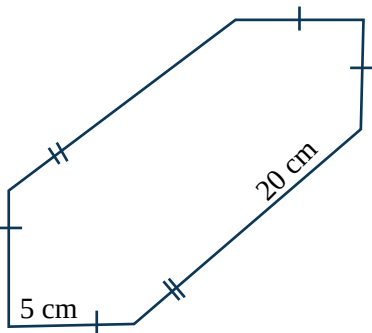
P =



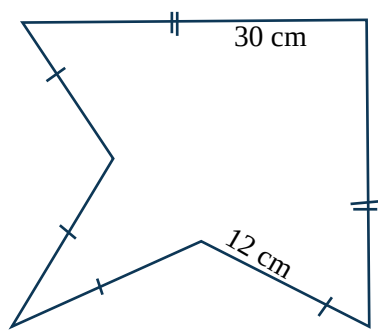
P =



P =



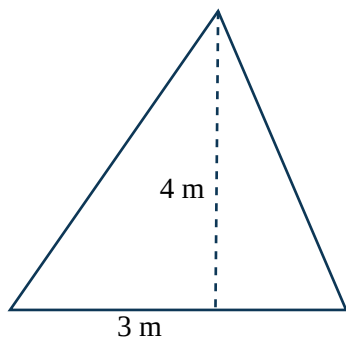
P =



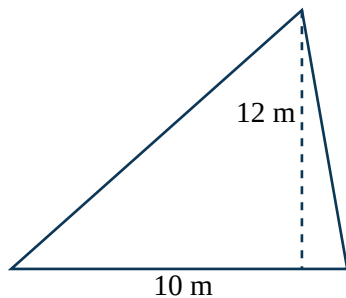
P =



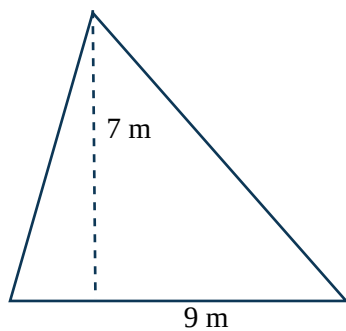
Find the area of the triangles whose base and height are given.



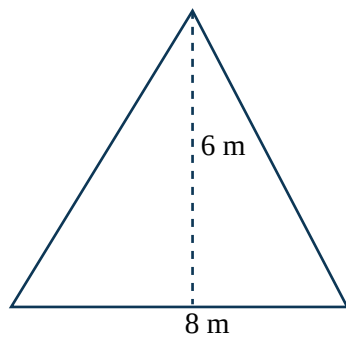
A =



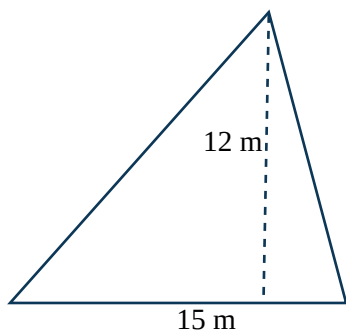
A =



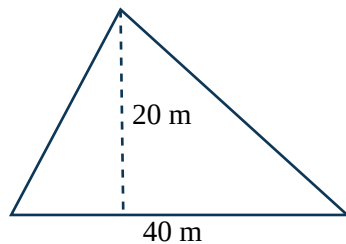
A =



A =



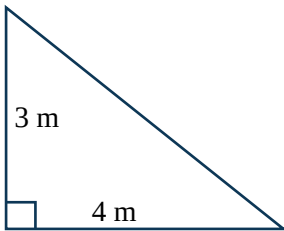
A =



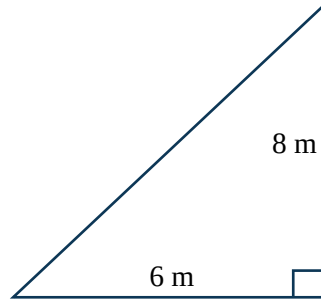
A =



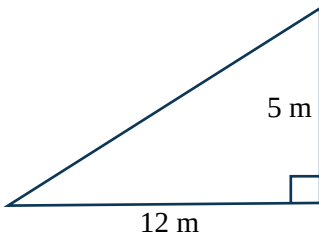
Find the area of the below right triangles.



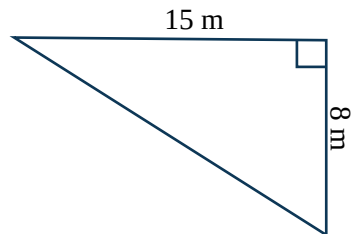
A =



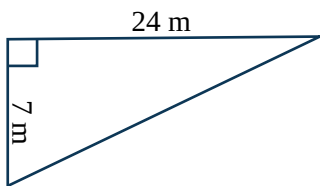
A =



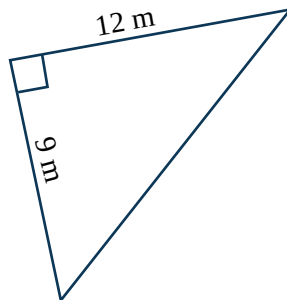
A =



A =



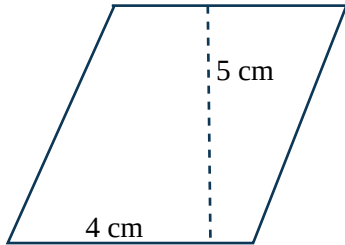
A =



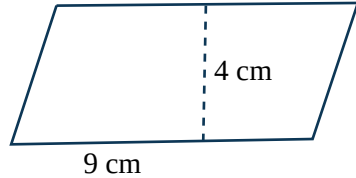
A =



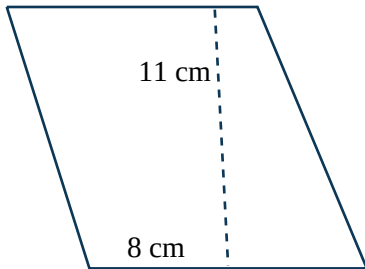
Find the area of the below parallelograms whose base and height are given.



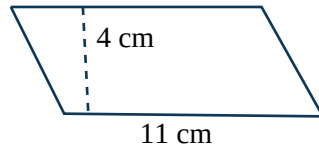
A =



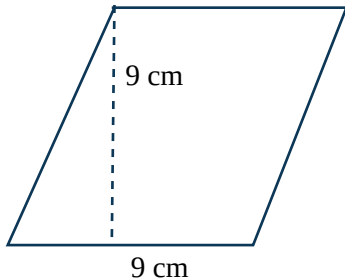
A =



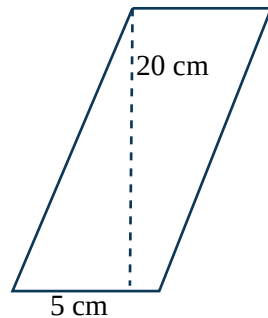
A =



A =



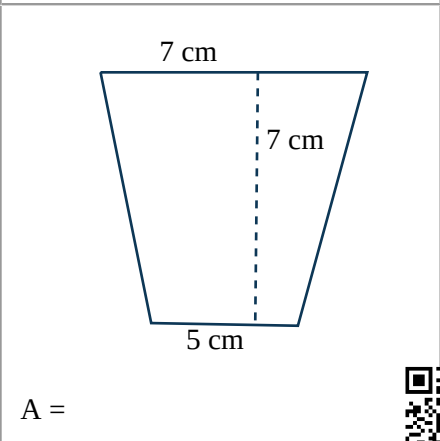
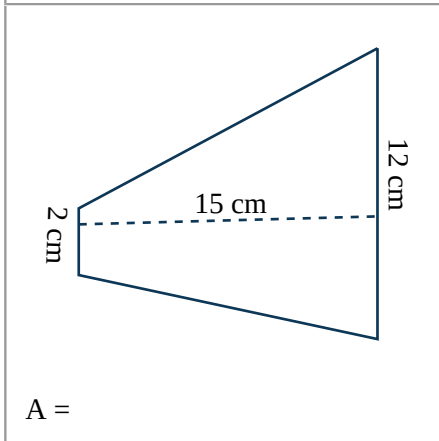
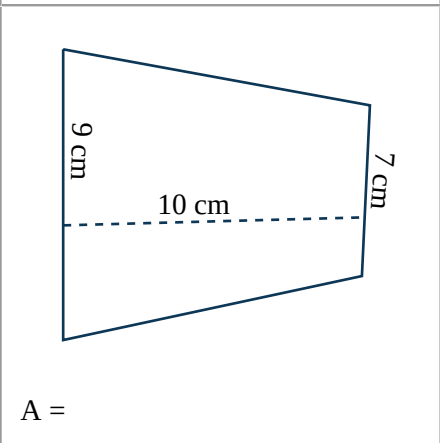
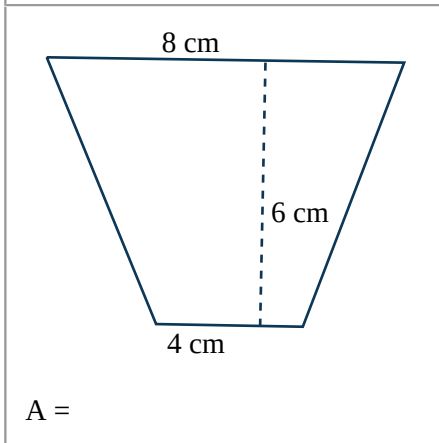
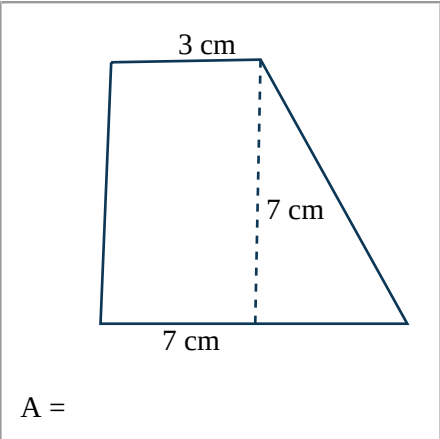
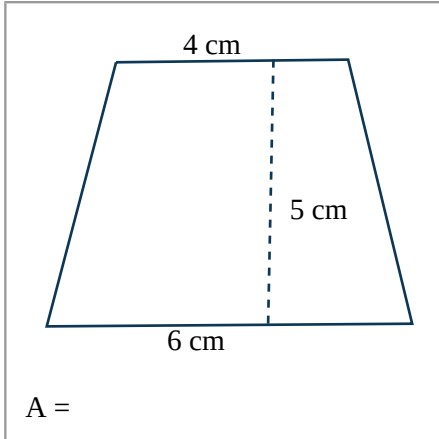
A =



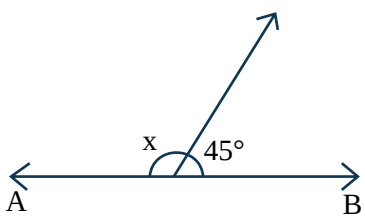
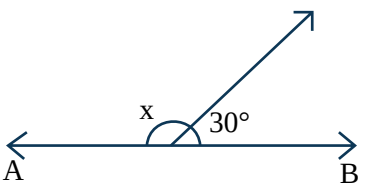
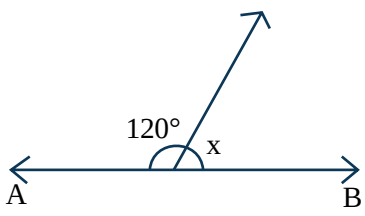
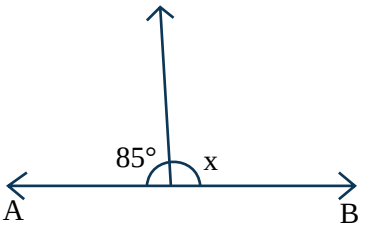
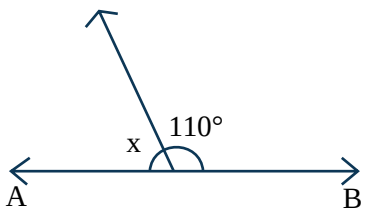
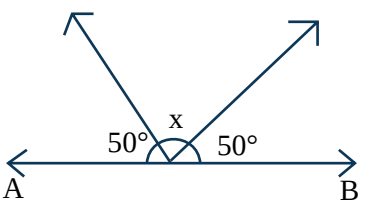
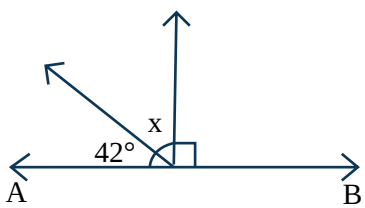
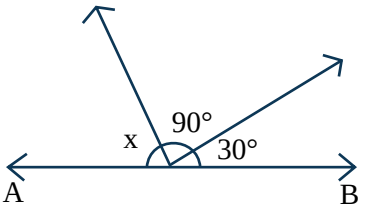
A =



Find the area of the below trapeziums whose height and parallel sides are given.

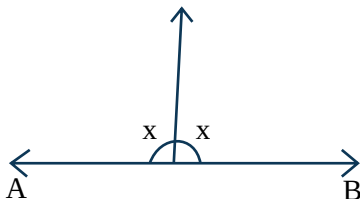
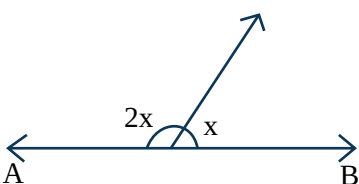
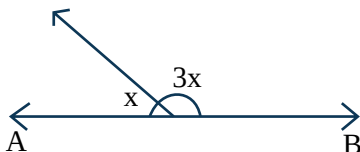
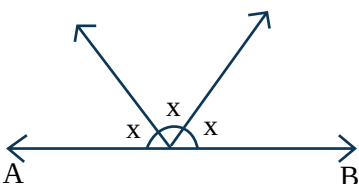
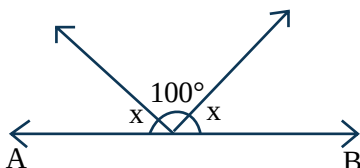
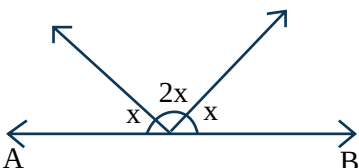
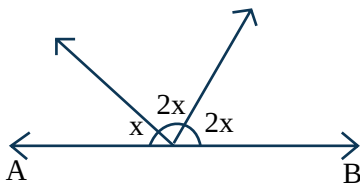
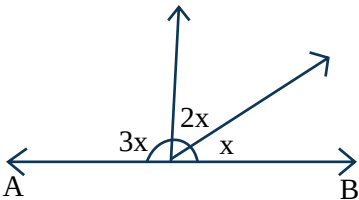


Find the missing angles where AB is a straight line.

|                                                                                                             |                                                                                                             |
|-------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------|
|  <p><math>x =</math></p>   |  <p><math>x =</math></p>   |
|  <p><math>x =</math></p>   |  <p><math>x =</math></p>   |
|  <p><math>x =</math></p>  |  <p><math>x =</math></p>  |
|  <p><math>x =</math></p> |  <p><math>x =</math></p> |



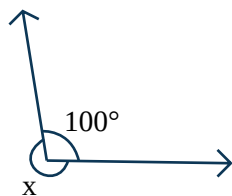
Find  $x$  from the below angles, where AB is a straight line.

|                                                                                                             |                                                                                                             |
|-------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------|
|  <p><math>x =</math></p>   |  <p><math>x =</math></p>   |
|  <p><math>x =</math></p>   |  <p><math>x =</math></p>   |
|  <p><math>x =</math></p>  |  <p><math>x =</math></p>  |
|  <p><math>x =</math></p> |  <p><math>x =</math></p> |

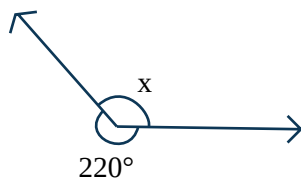




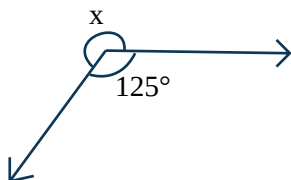
Find  $x$  from the below angles.



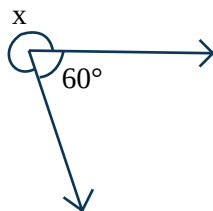
$x =$



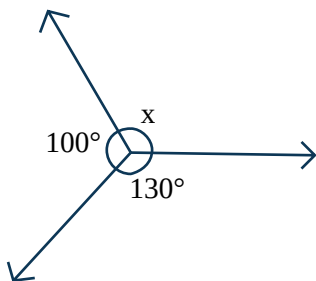
$x =$



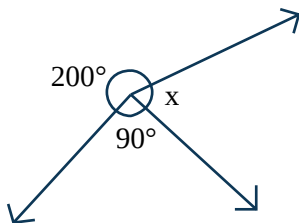
$x =$



$x =$



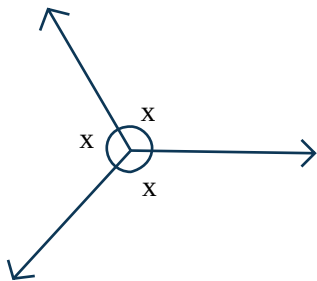
$x =$



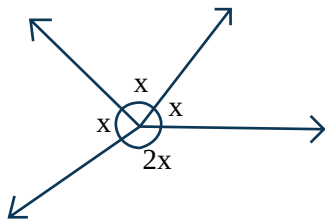
$x =$



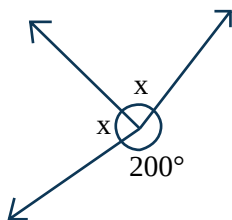
Find  $x$  from the below angles.



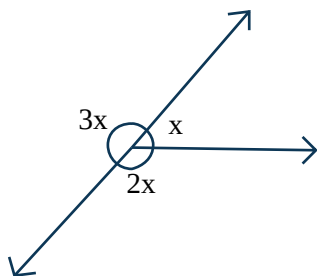
$x =$



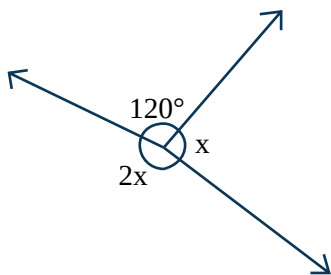
$x =$



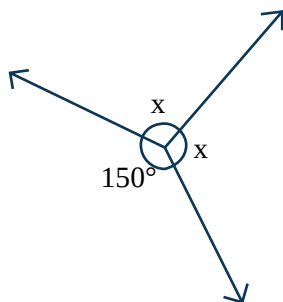
$x =$



$x =$



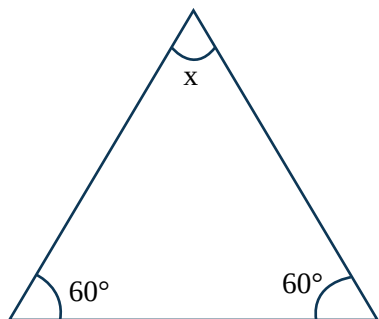
$x =$



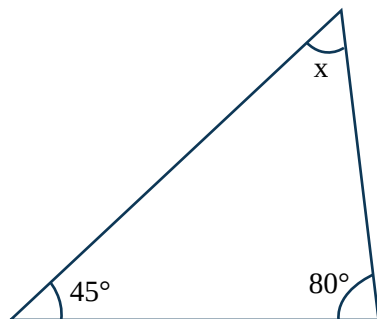
$x =$



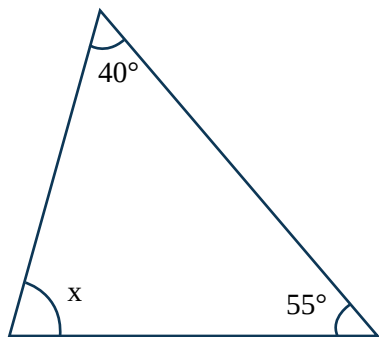
Find the missing angle in the below triangles.



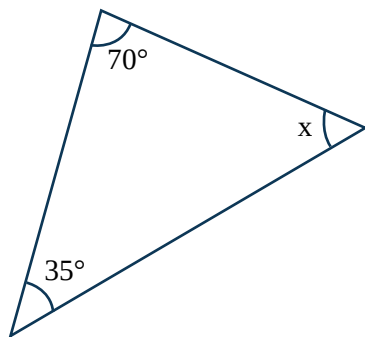
$x =$



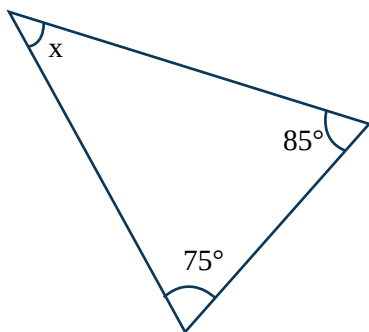
$x =$



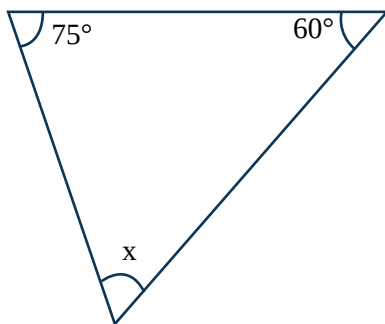
$x =$



$x =$



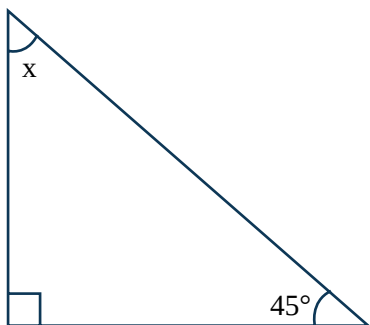
$x =$



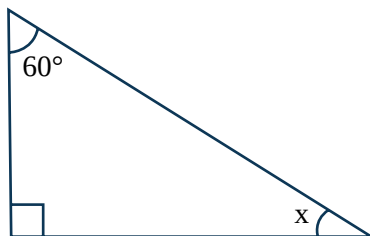
$x =$



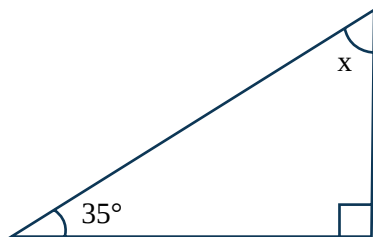
Find the missing angle in the below right triangles.



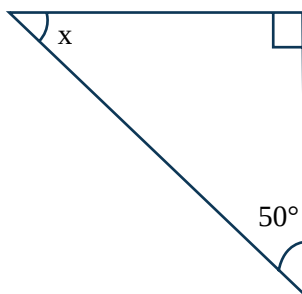
$$x =$$



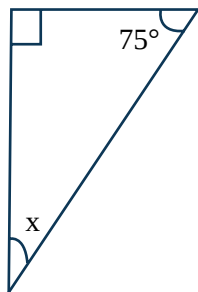
$$x =$$



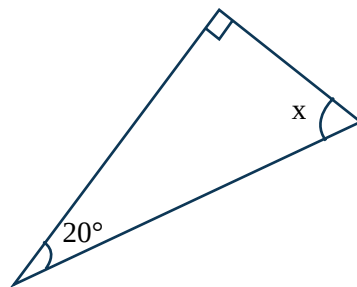
$$x =$$



$$x =$$



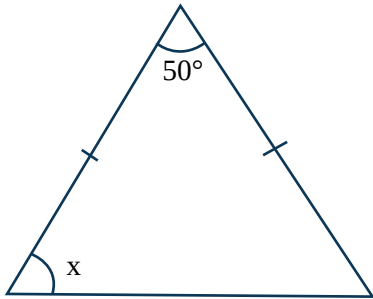
$$x =$$



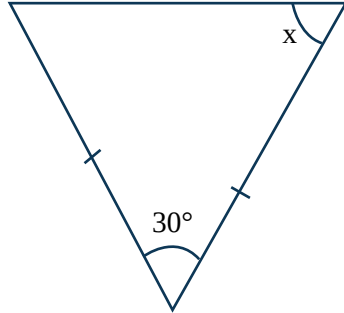
$$x =$$



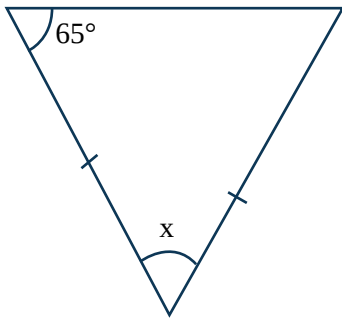
Find the missing angles in the below isosceles triangles.



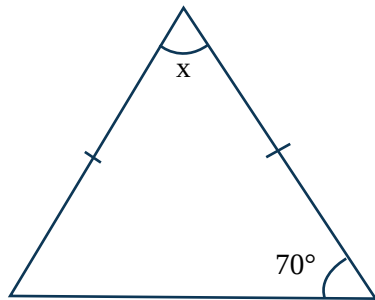
$$x =$$



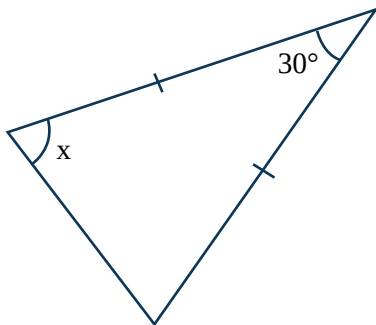
$$x =$$



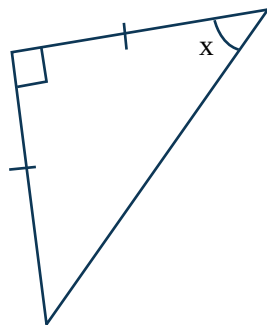
$$x =$$



$$x =$$



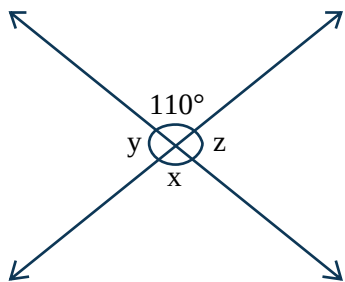
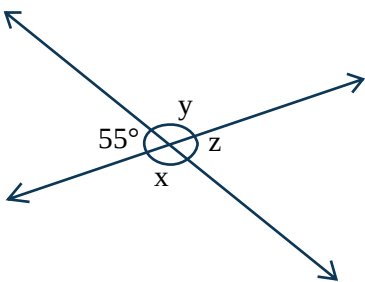
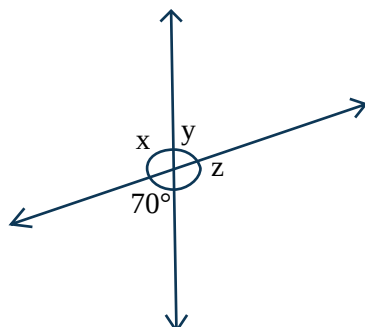
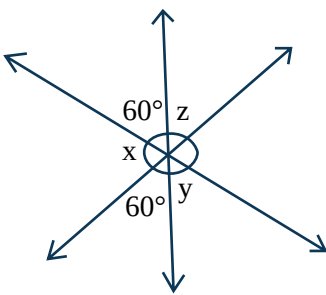
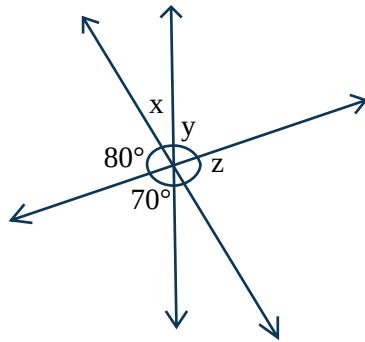
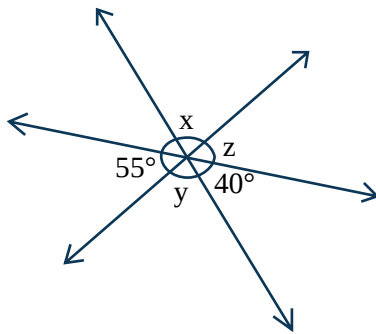
$$x =$$



$$x =$$

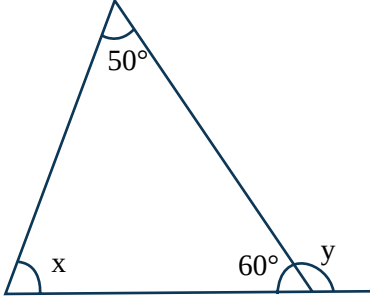
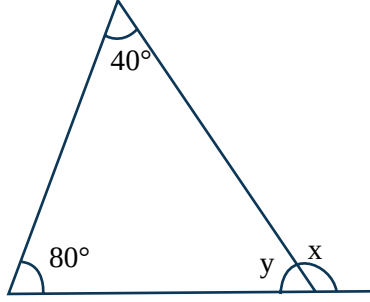
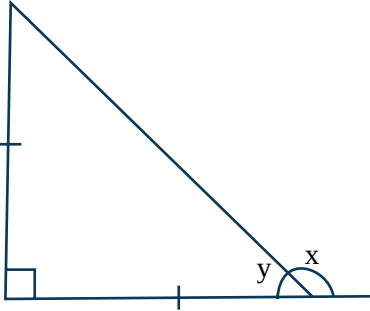
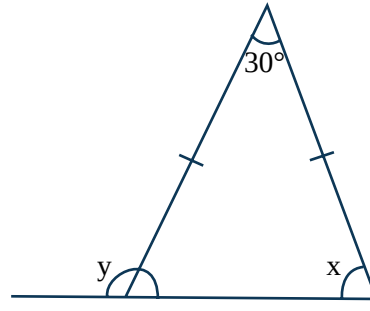
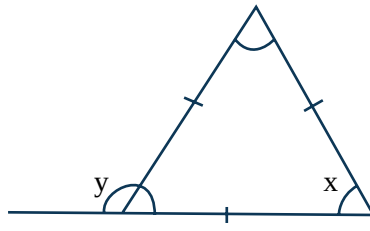
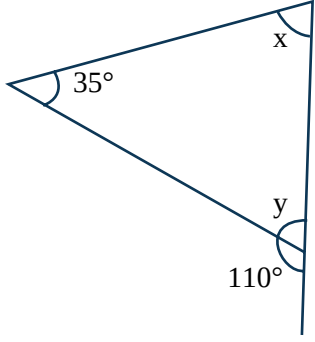


Find the missing angles in the intersection of straight lines.

|                                                                                                                                                         |                                                                                                                                                         |
|---------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|
|  <p><math>x =</math>      <math>y =</math>      <math>z =</math></p>   |  <p><math>x =</math>      <math>y =</math>      <math>z =</math></p>   |
|  <p><math>x =</math>      <math>y =</math>      <math>z =</math></p>   |  <p><math>x =</math>      <math>y =</math>      <math>z =</math></p>   |
|  <p><math>x =</math>      <math>y =</math>      <math>z =</math></p> |  <p><math>x =</math>      <math>y =</math>      <math>z =</math></p> |

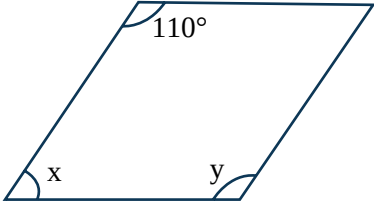
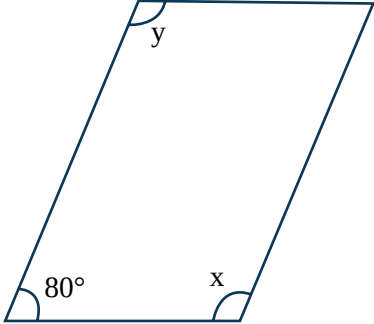
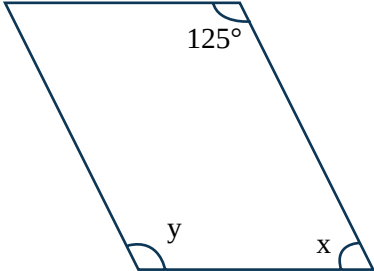
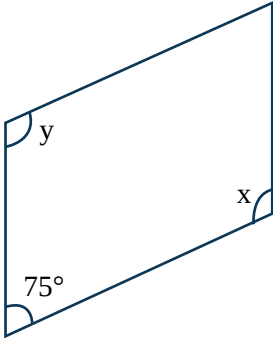
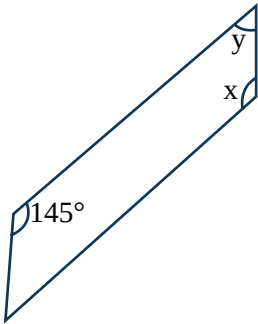
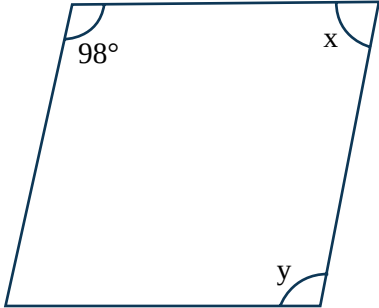


Find the missing angles in the below triangles having external angles.

|                                                                                                                                               |                                                                                                                                               |
|-----------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|
|  <p><math>x =</math>                  <math>y =</math></p>   |  <p><math>x =</math>                  <math>y =</math></p>   |
|  <p><math>x =</math>                  <math>y =</math></p>   |  <p><math>x =</math>                  <math>y =</math></p>   |
|  <p><math>x =</math>                  <math>y =</math></p> |  <p><math>x =</math>                  <math>y =</math></p> |



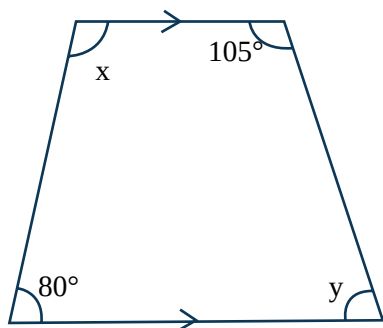
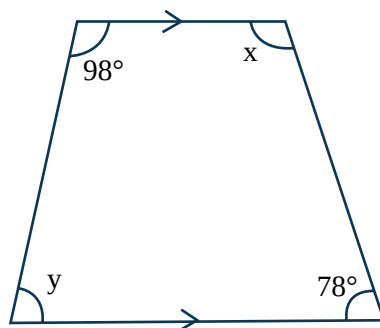
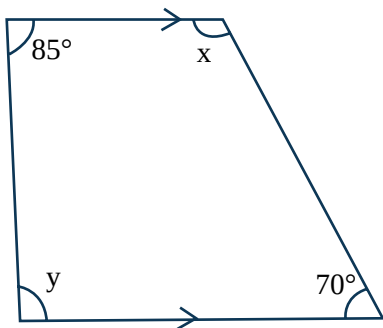
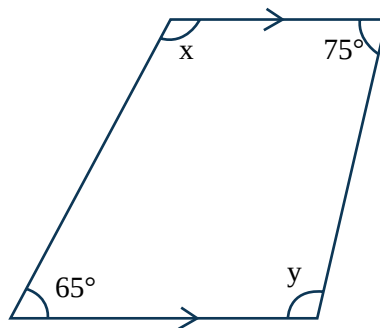
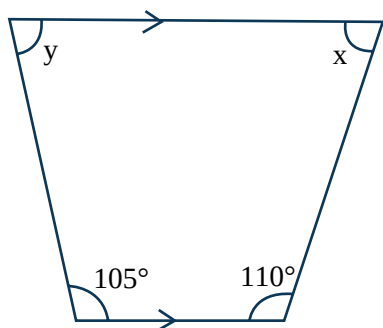
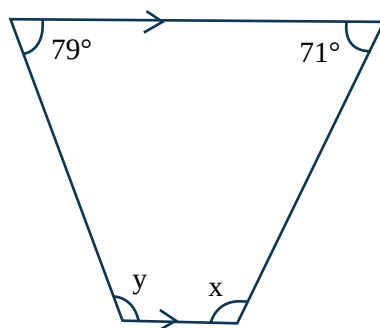
Find the missing angles in the below parallelograms.

|                                                                                                                                   |                                                                                                                                   |
|-----------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|
|  <p><math>x =</math>      <math>y =</math></p>   |  <p><math>x =</math>      <math>y =</math></p>   |
|  <p><math>x =</math>      <math>y =</math></p>   |  <p><math>x =</math>      <math>y =</math></p>   |
|  <p><math>x =</math>      <math>y =</math></p> |  <p><math>x =</math>      <math>y =</math></p> |

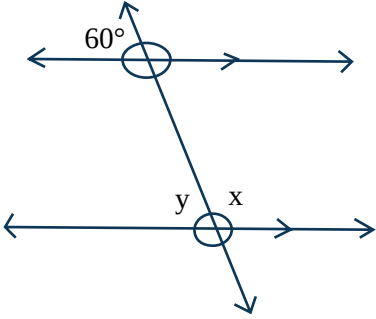
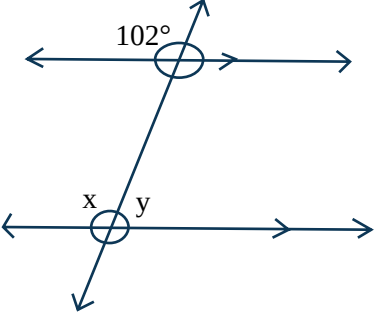
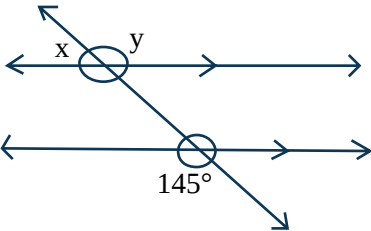
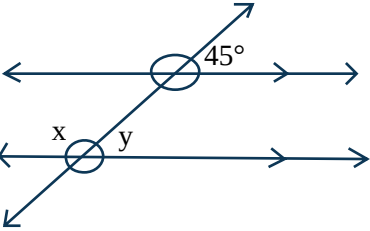
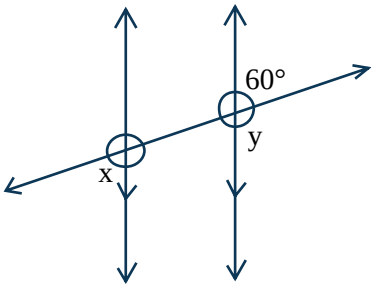
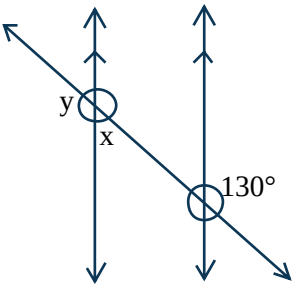




Find the missing angles in the below trapeziums.

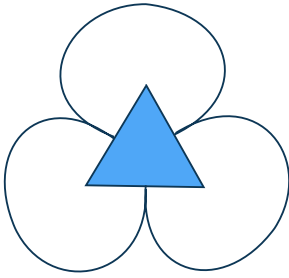

 $x =$ 
 $y =$ 

 $x =$ 
 $y =$ 

 $x =$ 
 $y =$ 

 $x =$ 
 $y =$ 

 $x =$ 
 $y =$ 

 $x =$ 
 $y =$ 


Find the missing angles in the below figures, where 2 of the lines are parallel.

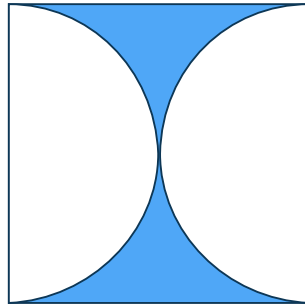
|                                                                                                                                                   |                                                                                                                                                   |
|---------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|
|  <p><math>x =</math>                      <math>y =</math></p>   |  <p><math>x =</math>                      <math>y =</math></p>   |
|  <p><math>x =</math>                      <math>y =</math></p>   |  <p><math>x =</math>                      <math>y =</math></p>   |
|  <p><math>x =</math>                      <math>y =</math></p> |  <p><math>x =</math>                      <math>y =</math></p> |



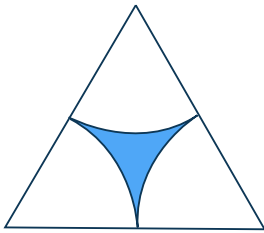
Find the number of lines of symmetry in the below figure.



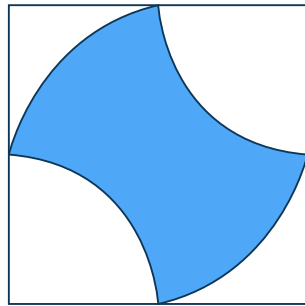
Ans =



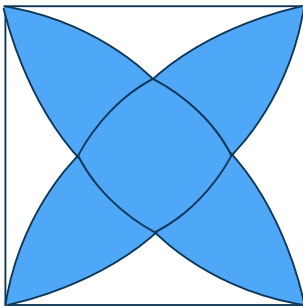
Ans =



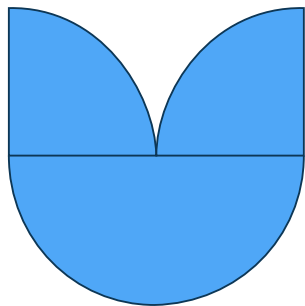
Ans =



Ans =



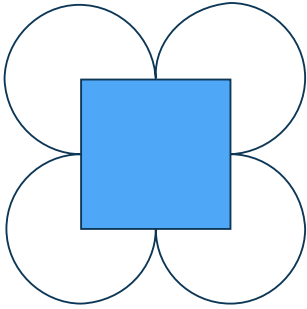
Ans =



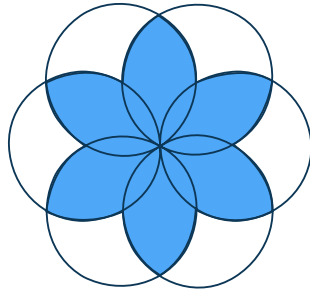
Ans =



Find the number of lines of symmetry in the below figure.



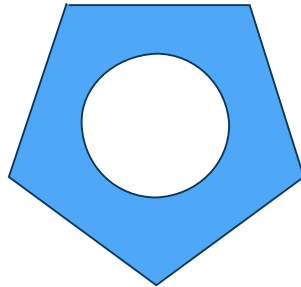
Ans =



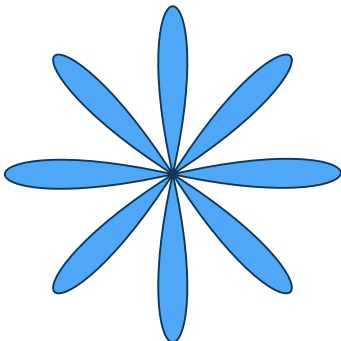
Ans =



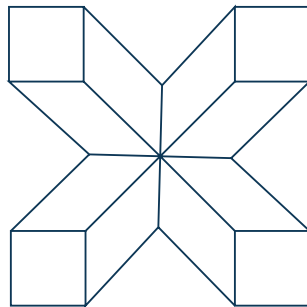
Ans =



Ans =



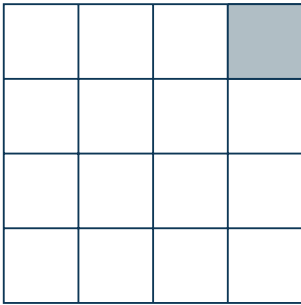
Ans =



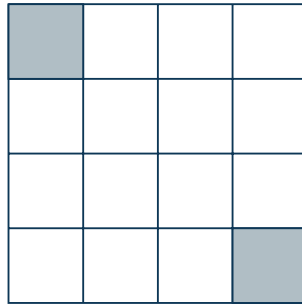
Ans =



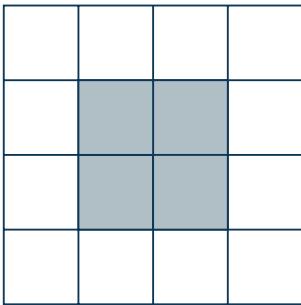
What is the order of rotational symmetry for the below figures?



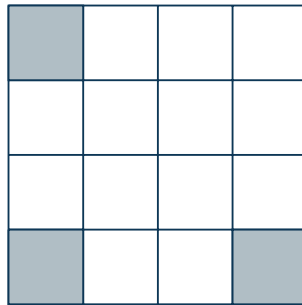
Ans =



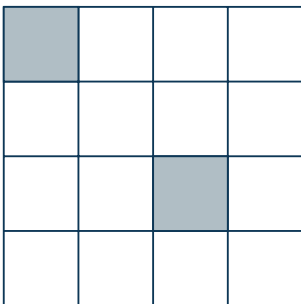
Ans =



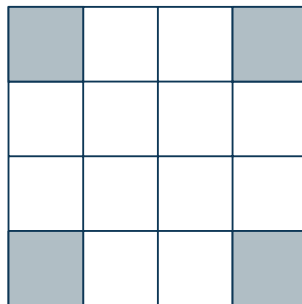
Ans =



Ans =



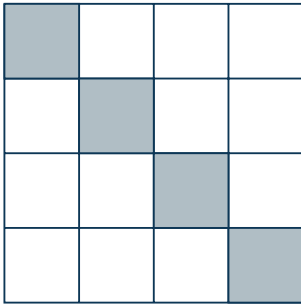
Ans =



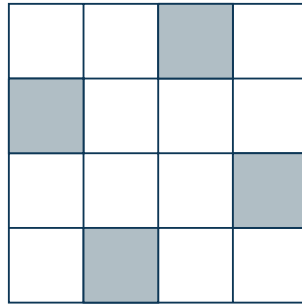
Ans =



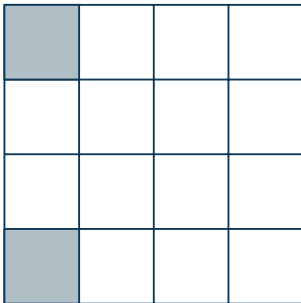
What is the order of rotational symmetry for the below figures?



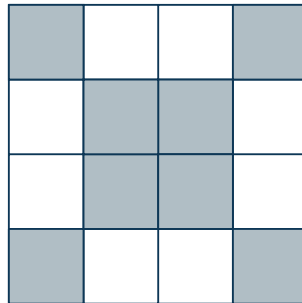
Ans =



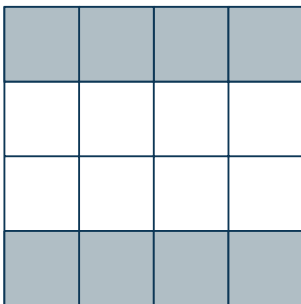
Ans =



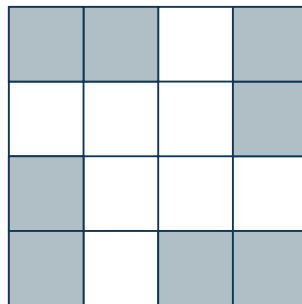
Ans =



Ans =



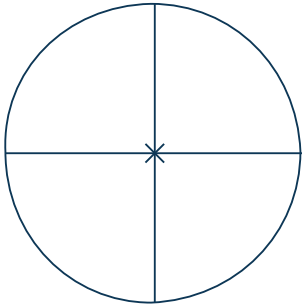
Ans =



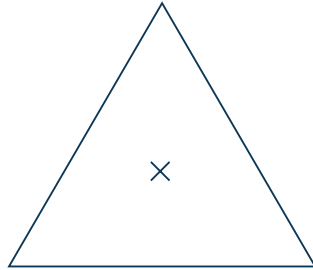
Ans =



What is the order of rotational symmetry for the below figures?



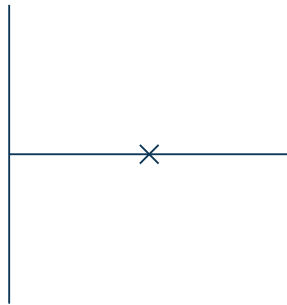
Ans =



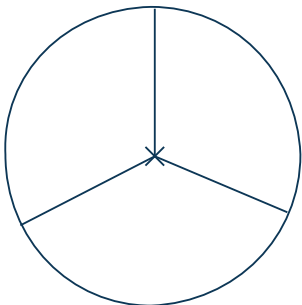
Ans =



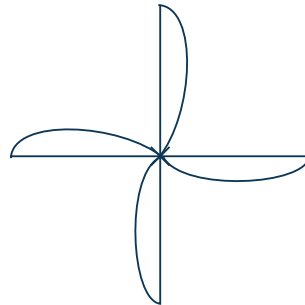
Ans =



Ans =



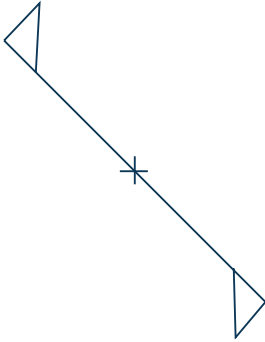
Ans =



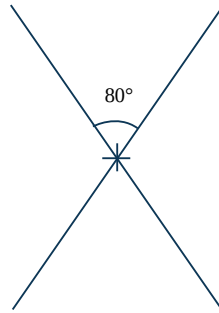
Ans =



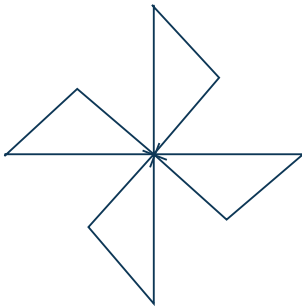
What is the order of rotational symmetry for the below figures?



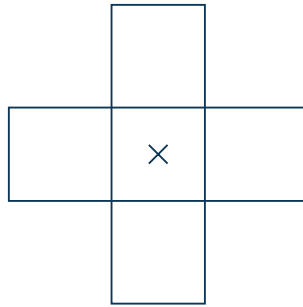
Ans =



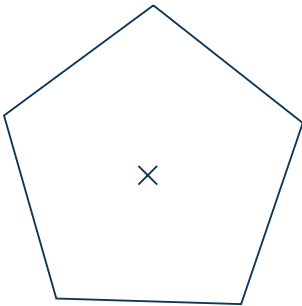
Ans =



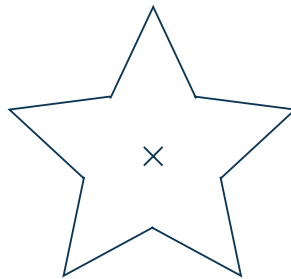
Ans =



Ans =



Ans =

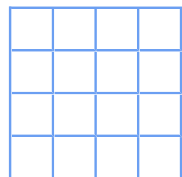
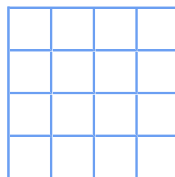
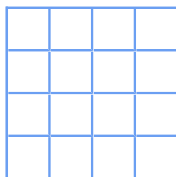
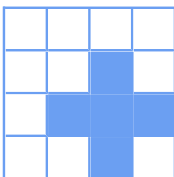
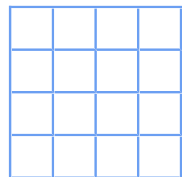
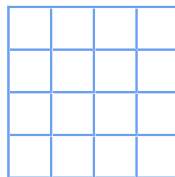
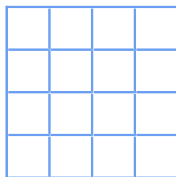
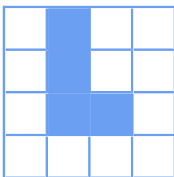
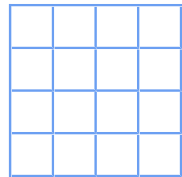
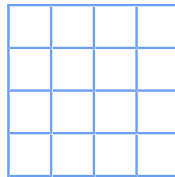
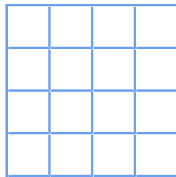
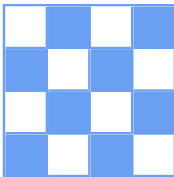
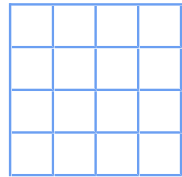
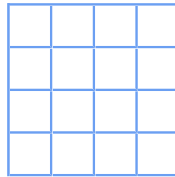
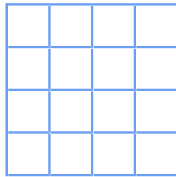
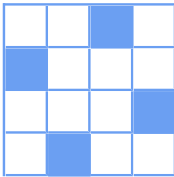
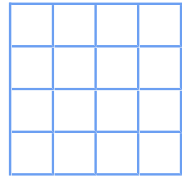
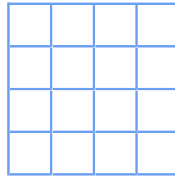
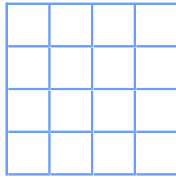
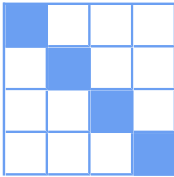
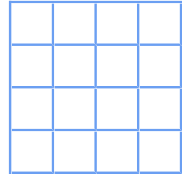
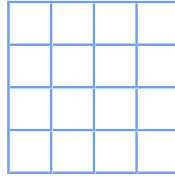
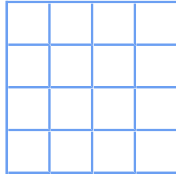
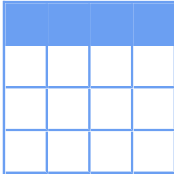


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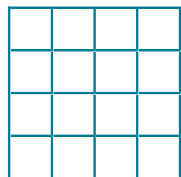
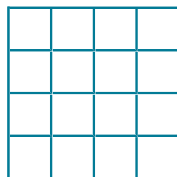
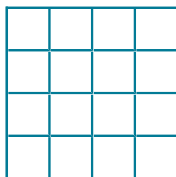
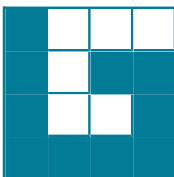
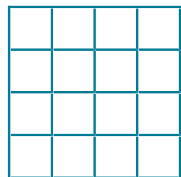
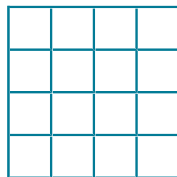
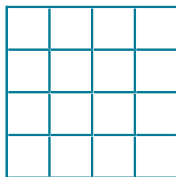
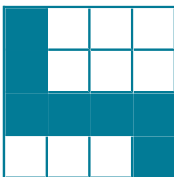
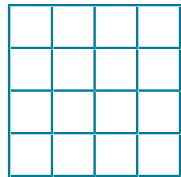
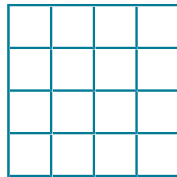
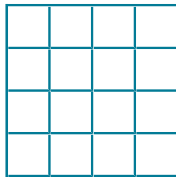
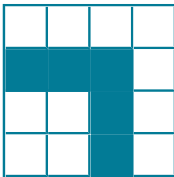
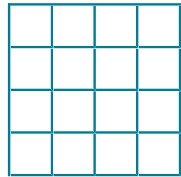
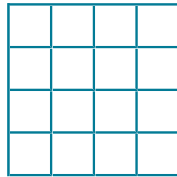
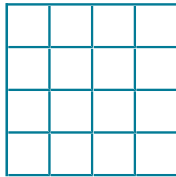
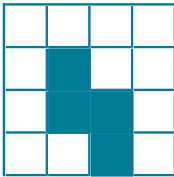
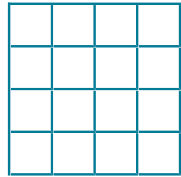
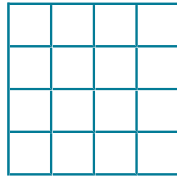
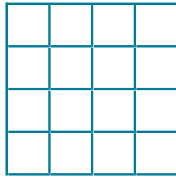
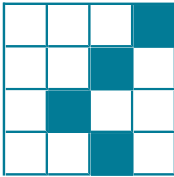
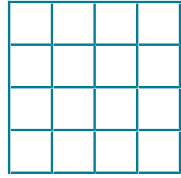
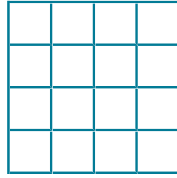
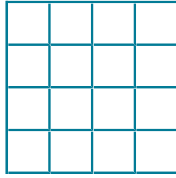
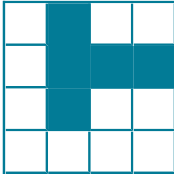




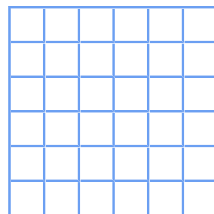
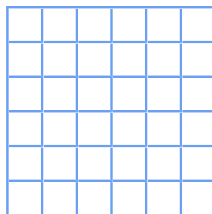
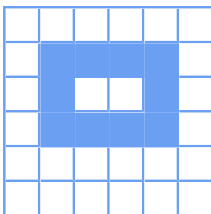
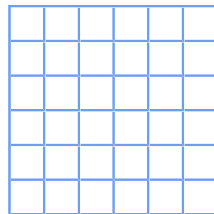
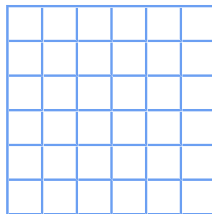
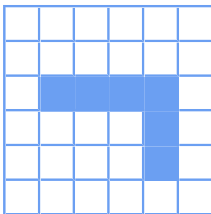
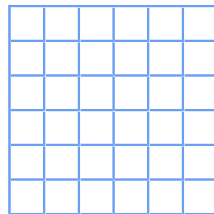
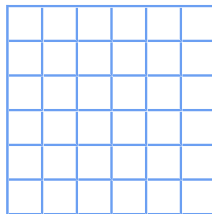
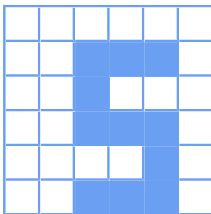
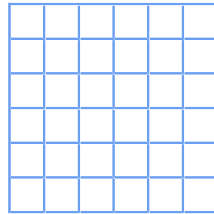
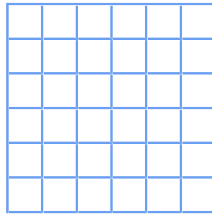
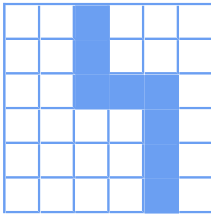
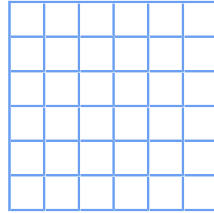
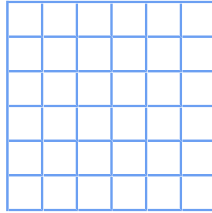
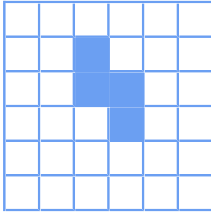
Colors the cells in the below tables by imagining the shape is rotated  $90^\circ$ ,  $180^\circ$ , and  $270^\circ$



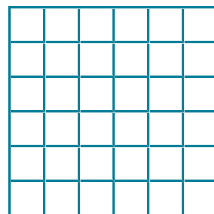
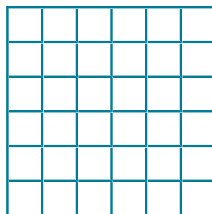
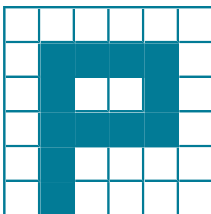
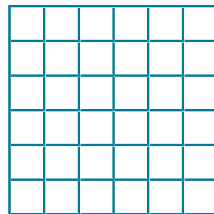
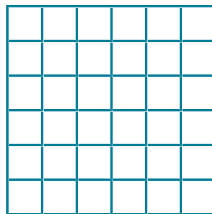
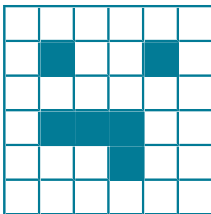
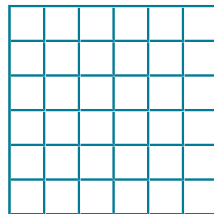
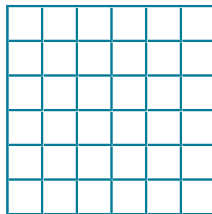
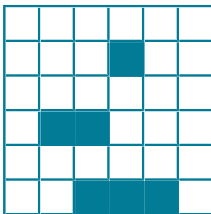
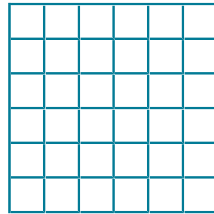
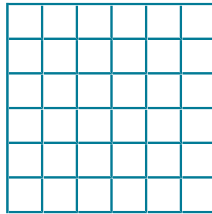
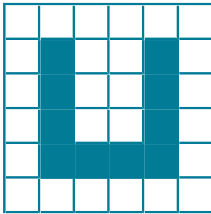
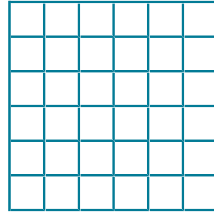
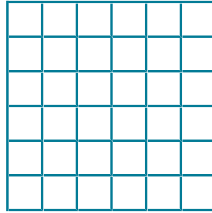
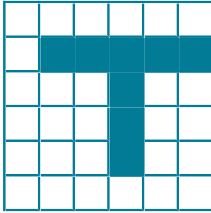
Colors the cells in the below tables by imagining the shape is rotated  $90^\circ$ ,  $180^\circ$ , and  $270^\circ$



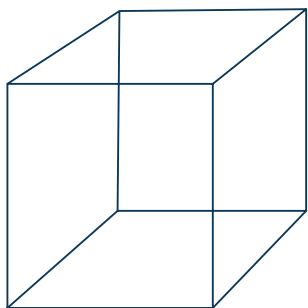
Colors the cells in the below tables by imagining the shape is rotated  $90^\circ$  and  $270^\circ$



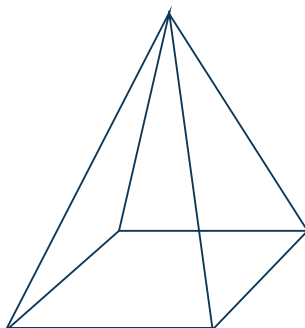
Colors the cells in the below tables by imagining the shape is rotated  
 $90^\circ$  anti clockwise and  $180^\circ$



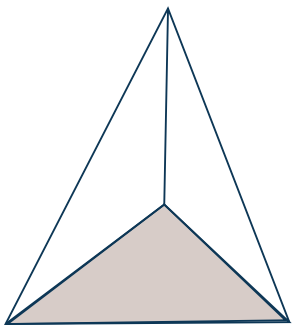
Find the number of faces, vertices and edges for the below 3d shapes.



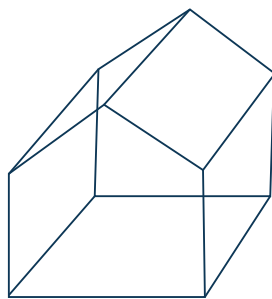
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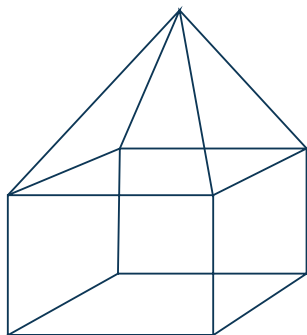
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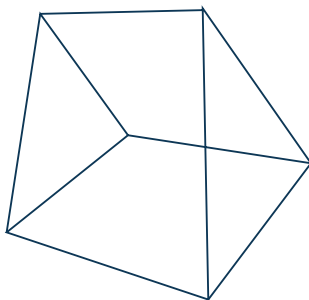
F =      V =      E =



F =      V =      E =



F =      V =      E =



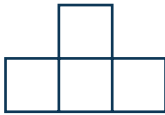
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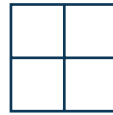
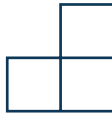
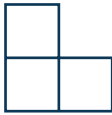
A set of cube boxes are arranged together. The front, side and top view are given. Find the number of cubes.



Ans =



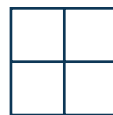
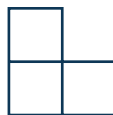
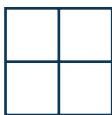
Ans =



Ans =



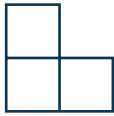
Ans =



Ans =



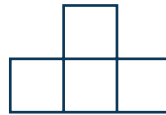
A set of cube boxes are arranged together. The front, side and top view are given. Find the number of cubes.



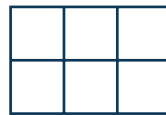
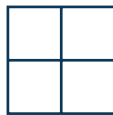
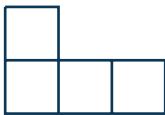
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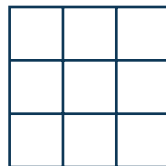
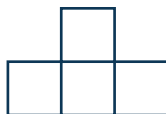
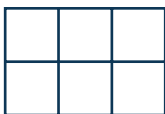
Ans =



Ans =



Ans =



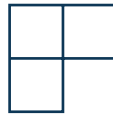
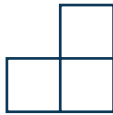
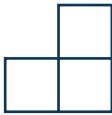
Ans =



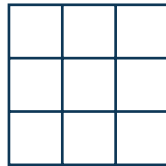
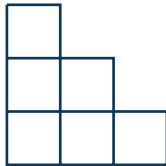
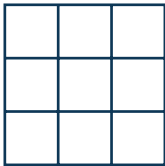
A set of cube boxes are arranged together. The front, side and top view are given. Find the number of cubes.



Ans =



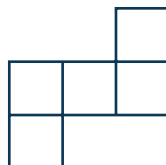
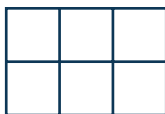
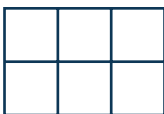
Ans =



Ans =



Ans =



Ans =





## Find the Value

$$\text{Pear} + \text{Pear} = 24$$

$$\text{Banana} + \text{Banana} = 12$$

$$\text{Pear} = \underline{\quad} \quad \text{Banana} = \underline{\quad}$$

$$\text{Pear} + \text{Pear} = 14$$

$$\text{Pear} + \text{Banana} = 10$$

$$\text{Pear} = \underline{\quad} \quad \text{Banana} = \underline{\quad}$$

$$\text{Mango} + \text{Mango} + \text{Mango} = 21$$

$$\text{Mango} + \text{Mango} + \text{Grapes} = 19$$

$$\text{Mango} = \underline{\quad} \quad \text{Grapes} = \underline{\quad}$$

$$\text{Cherry} + \text{Banana} = 10$$

$$\text{Banana} + \text{Banana} = 8$$

$$\text{Cherry} = \underline{\quad} \quad \text{Banana} = \underline{\quad}$$

$$\text{Cherry} + \text{Cherry} + \text{Banana} = 9$$

$$\text{Banana} + \text{Banana} + \text{Banana} = 3$$

$$\text{Cherry} = \underline{\quad} \quad \text{Banana} = \underline{\quad}$$

$$\text{Mango} + \text{Mango} + \text{Mango} = 15$$

$$\text{Grapes} + \text{Grapes} + \text{Mango} = 13$$

$$\text{Mango} + \text{Grapes} + \text{Pear} = 10$$

$$\text{Mango} = \underline{\quad} \quad \text{Grapes} = \underline{\quad} \quad \text{Pear} = \underline{\quad}$$

$$\text{Mango} + \text{Mango} + \text{Cherry} = 11$$

$$\text{Cherry} + \text{Cherry} + \text{Cherry} = 21$$

$$\text{Grapes} + \text{Grapes} + \text{Cherry} = 15$$

$$\text{Cherry} = \underline{\quad} \quad \text{Mango} = \underline{\quad} \quad \text{Grapes} = \underline{\quad}$$

$$\text{Mango} + \text{Pear} + \text{Banana} = 16$$

$$\text{Mango} + \text{Mango} + \text{Pear} = 16$$

$$\text{Pear} + \text{Pear} + \text{Pear} = 12$$

$$\text{Mango} = \underline{\quad} \quad \text{Pear} = \underline{\quad} \quad \text{Banana} = \underline{\quad}$$



## Find the Value

$$\text{Peach} + \text{Peach} + \text{Cherry} = 21$$

$$\text{Apple} + \text{Peach} + \text{Cherry} = 16$$

$$\text{Cherry} + \text{Cherry} + \text{Cherry} = 3$$

$$\text{Cherry} = \underline{\quad} \quad \text{Peach} = \underline{\quad} \quad \text{Apple} = \underline{\quad}$$

$$\text{Peach} + \text{Peach} + \text{Peach} = 18$$

$$\text{Pear} + \text{Grapes} + \text{Peach} = 13$$

$$\text{Grapes} + \text{Grapes} + \text{Peach} = 12$$

$$\text{Peach} = \underline{\quad} \quad \text{Grapes} = \underline{\quad} \quad \text{Pear} = \underline{\quad}$$

$$\text{Grapes} + \text{Apple} = 10$$

$$\text{Grapes} - \text{Apple} = 2$$

$$\text{Grapes} = \underline{\quad} \quad \text{Apple} = \underline{\quad}$$

$$\text{Banana} + \text{Grapes} = 15$$

$$\text{Banana} - \text{Grapes} = 5$$

$$\text{Banana} = \underline{\quad} \quad \text{Grapes} = \underline{\quad}$$

$$\text{Peach} + \text{Grapes} = 12$$

$$\text{Grapes} - \text{Peach} = 4$$

$$\text{Peach} = \underline{\quad} \quad \text{Grapes} = \underline{\quad}$$

$$\text{Grapes} - \text{Apple} = 10$$

$$\text{Apple} + \text{Grapes} = 50$$

$$\text{Apple} = \underline{\quad} \quad \text{Grapes} = \underline{\quad}$$

$$\text{Pear} - \text{Cherry} = 20$$

$$\text{Pear} + \text{Cherry} = 30$$

$$\text{Pear} = \underline{\quad} \quad \text{Cherry} = \underline{\quad}$$

$$3 \times \text{Grapes} = 9$$

$$5 \times \text{Banana} = 25$$

$$\text{Grapes} = \underline{\quad} \quad \text{Banana} = \underline{\quad}$$



## Find the Value

$$10 \times \text{cherry} = 70$$

$$7 \times \text{apple} = 35$$

$$\text{cherry} = \underline{\quad} \quad \text{apple} = \underline{\quad}$$

$$2 \times \text{apple} = 40$$

$$3 \times \text{mango} = 30$$

$$\text{apple} = \underline{\quad} \quad \text{mango} = \underline{\quad}$$

$$4 \times \text{grapes} = 8$$

$$8 \times \text{cherry} = 32$$

$$\text{grapes} = \underline{\quad} \quad \text{cherry} = \underline{\quad}$$

$$3 \times \text{grapes} = 12$$

$$5 \times \text{pear} = 45$$

$$\text{grapes} = \underline{\quad} \quad \text{pear} = \underline{\quad}$$

$$3 \times \text{grapes} = 15$$

$$\text{pear} - \text{grapes} = 5$$

$$\text{grapes} = \underline{\quad} \quad \text{pear} = \underline{\quad}$$

$$6 \times \text{pear} = 24$$

$$\text{mango} - \text{pear} = 4$$

$$\text{pear} = \underline{\quad} \quad \text{mango} = \underline{\quad}$$

$$\text{pear} - \text{bananas} = 6$$

$$8 \times \text{bananas} = 16$$

$$\text{bananas} = \underline{\quad} \quad \text{pear} = \underline{\quad}$$

$$\text{bananas} + \text{grapes} = 11$$

$$5 \times \text{bananas} = 30$$

$$\text{bananas} = \underline{\quad} \quad \text{grapes} = \underline{\quad}$$



## Find the Value

$$3 \times \text{grapes} = 12$$

$$\text{cherries} - \text{grapes} = 20$$

$$\text{grapes} = \underline{\quad} \quad \text{cherries} = \underline{\quad}$$

$$\text{grapes} + \text{apple} = 10$$

$$\text{cherries} + \text{apple} = 6$$

$$\text{grapes} + \text{cherries} = 8$$

$$\text{grapes} = \underline{\quad} \quad \text{apple} = \underline{\quad} \quad \text{cherries} = \underline{\quad}$$

$$\text{bananas} + \text{pear} = 15$$

$$\text{bananas} - \text{pear} = 5$$

$$\text{bananas} + \text{apple} = 18$$

$$\text{bananas} = \underline{\quad} \quad \text{pear} = \underline{\quad} \quad \text{apple} = \underline{\quad}$$

$$\text{apple} + \text{pear} = 12$$

$$\text{grapes} + \text{pear} = 10$$

$$\text{pear} - \text{apple} = 4$$

$$\text{apple} = \underline{\quad} \quad \text{pear} = \underline{\quad} \quad \text{grapes} = \underline{\quad}$$

$$\text{orange} + \text{pear} = 100$$

$$\text{cherries} - \text{pear} = 10$$

$$\text{pear} + \text{cherries} = 50$$

$$\text{pear} = \underline{\quad} \quad \text{cherries} = \underline{\quad} \quad \text{orange} = \underline{\quad}$$

$$\text{apple} - \text{bananas} = 20$$

$$\text{apple} + \text{bananas} = 30$$

$$\text{bananas} + \text{pear} = 15$$

$$\text{apple} = \underline{\quad} \quad \text{bananas} = \underline{\quad} \quad \text{pear} = \underline{\quad}$$

$$\text{bananas} + \text{orange} = 10$$

$$\text{bananas} + 2 \times \text{orange} = 14$$

$$\text{bananas} = \underline{\quad} \quad \text{orange} = \underline{\quad}$$

$$\text{grapes} + \text{pear} = 12$$

$$\text{grapes} + 2 \times \text{pear} = 15$$

$$\text{grapes} = \underline{\quad} \quad \text{pear} = \underline{\quad}$$



## Find the Value

$$\text{Peach} + \text{Apple} = 8$$

$$\text{Peach} + 2 \times \text{Apple} = 9$$

$$\text{Peach} = \underline{\quad} \quad \text{Apple} = \underline{\quad}$$

$$\text{Cherry} + \text{Apple} = 7$$

$$\text{Cherry} + 3 \times \text{Apple} = 15$$

$$\text{Cherry} = \underline{\quad} \quad \text{Apple} = \underline{\quad}$$

$$\text{Pear} + \text{Peach} = 11$$

$$\text{Pear} + 4 \times \text{Peach} = 35$$

$$\text{Pear} = \underline{\quad} \quad \text{Peach} = \underline{\quad}$$

$$\text{Banana} + \text{Cherry} = 9$$

$$\text{Cherry} + \text{Peach} = 7$$

$$3 \times \text{Peach} = 9$$

$$\text{Banana} = \underline{\quad} \quad \text{Cherry} = \underline{\quad} \quad \text{Peach} = \underline{\quad}$$

$$\text{Cherry} + \text{Apple} = 18$$

$$\text{Apple} - \text{Banana} = 3$$

$$4 \times \text{Banana} = 20$$

$$\text{Cherry} = \underline{\quad} \quad \text{Apple} = \underline{\quad} \quad \text{Banana} = \underline{\quad}$$

$$\text{Grape} - \text{Peach} = 10$$

$$\text{Peach} - \text{Cherry} = 5$$

$$5 \times \text{Cherry} = 15$$

$$\text{Grape} = \underline{\quad} \quad \text{Peach} = \underline{\quad} \quad \text{Cherry} = \underline{\quad}$$

$$\text{Apple} - \text{Peach} = 5$$

$$\text{Grape} - \text{Peach} = 5$$

$$7 \times \text{Peach} = 70$$

$$\text{Apple} = \underline{\quad} \quad \text{Grape} = \underline{\quad} \quad \text{Peach} = \underline{\quad}$$

$$\text{Grape} - \text{Apple} = \text{Banana}$$

$$\text{Apple} + \text{Banana} = 22$$

$$\text{Banana} \times \text{Banana} = 22$$

$$\text{Grape} = \underline{\quad} \quad \text{Apple} = \underline{\quad} \quad \text{Banana} = \underline{\quad}$$



## Find the Value

$$3 \times \text{cherry} + \text{banana} = 9$$

$$5 \times \text{cherry} + \text{banana} = 13$$

$$\text{cherry} = \underline{\quad} \quad \text{banana} = \underline{\quad}$$

$$8 \times \text{cherry} + \text{apple} = 42$$

$$5 \times \text{cherry} + \text{apple} = 27$$

$$\text{cherry} = \underline{\quad} \quad \text{apple} = \underline{\quad}$$

$$3 \times \text{banana} + \text{pear} = 10$$

$$4 \times \text{banana} + \text{pear} = 13$$

$$\text{banana} = \underline{\quad} \quad \text{pear} = \underline{\quad}$$

$$2 \times \text{apple} + \text{pear} = 19$$

$$3 \times \text{apple} + \text{pear} = 26$$

$$\text{apple} = \underline{\quad} \quad \text{pear} = \underline{\quad}$$

$$6 \times \text{banana} + \text{pear} = 65$$

$$5 \times \text{banana} + \text{pear} = 56$$

$$\text{banana} = \underline{\quad} \quad \text{pear} = \underline{\quad}$$

$$\text{banana} + \text{apple} = 4$$

$$\text{apple} + \text{grapes} = 5$$

$$\text{banana} + \text{apple} + \text{grapes} = 6$$

$$\text{banana} = \underline{\quad} \quad \text{apple} = \underline{\quad} \quad \text{grapes} = \underline{\quad}$$

$$\text{cherry} + \text{banana} = 7$$

$$\text{banana} + \text{apple} = 8$$

$$\text{cherry} + \text{banana} + \text{apple} = 10$$

$$\text{cherry} = \underline{\quad} \quad \text{banana} = \underline{\quad} \quad \text{apple} = \underline{\quad}$$

$$\text{orange} + \text{apple} = 50$$

$$\text{apple} + \text{pear} = 30$$

$$\text{orange} + \text{apple} + \text{pear} = 60$$

$$\text{orange} = \underline{\quad} \quad \text{apple} = \underline{\quad} \quad \text{pear} = \underline{\quad}$$



## Find the Value

$$\text{Cherry} + \text{Apple} = 9$$

$$\text{Apple} + \text{Grapes} = 8$$

$$\text{Cherry} + \text{Apple} + \text{Grapes} = 14$$

$$\text{Cherry} = \underline{\quad} \quad \text{Apple} = \underline{\quad} \quad \text{Grapes} = \underline{\quad}$$

$$\text{Grapes} + \text{Apple} = 8$$

$$\text{Apple} + \text{Pear} = 8$$

$$\text{Grapes} + \text{Apple} + \text{Pear} = 12$$

$$\text{Grapes} = \underline{\quad} \quad \text{Apple} = \underline{\quad} \quad \text{Pear} = \underline{\quad}$$

$$\text{Pear} + 4 \times \text{Apple} = 13$$

$$\text{Pear} + 3 \times \text{Apple} = 10$$

$$\text{Apple} = \underline{\quad} \quad \text{Pear} = \underline{\quad}$$

$$\text{Banana} + 2 \times \text{Mango} = 19$$

$$\text{Banana} + 3 \times \text{Mango} = 26$$

$$\text{Mango} = \underline{\quad} \quad \text{Banana} = \underline{\quad}$$

$$\text{Apple} + 6 \times \text{Banana} = 65$$

$$\text{Apple} + 5 \times \text{Banana} = 56$$

$$\text{Banana} = \underline{\quad} \quad \text{Apple} = \underline{\quad}$$

$$\text{Mango} + 3 \times \text{Banana} = 9$$

$$\text{Mango} + 5 \times \text{Banana} = 13$$

$$\text{Banana} = \underline{\quad} \quad \text{Mango} = \underline{\quad}$$

$$\text{Cherry} + 8 \times \text{Grapes} = 42$$

$$\text{Cherry} + 5 \times \text{Grapes} = 27$$

$$\text{Grapes} = \underline{\quad} \quad \text{Cherry} = \underline{\quad}$$



Find the value of expressions for the given value of  $x$

| $x$ | $2x + 5$ | $4x + 2$ | $3x - 1$ | $5x - 3$ | $6x + 7$ |
|-----|----------|----------|----------|----------|----------|
| 0   |          |          |          |          |          |
| 2   |          |          |          |          |          |
| 4   |          |          |          |          |          |
| 6   |          |          |          |          |          |
| 8   |          |          |          |          |          |
| 1   |          |          |          |          |          |
| 3   |          |          |          |          |          |
| 5   |          |          |          |          |          |
| 7   |          |          |          |          |          |
| 9   |          |          |          |          |          |
| -1  |          |          |          |          |          |
| -3  |          |          |          |          |          |
| -5  |          |          |          |          |          |
| -2  |          |          |          |          |          |
| -4  |          |          |          |          |          |





Find the value of expressions for the given value of  $x$

| $x$ | $7x - 6$ | $2x - 10$ | $10x - 10$ | $5x - 10$ | $4x - 8$ |
|-----|----------|-----------|------------|-----------|----------|
| 0   |          |           |            |           |          |
| 2   |          |           |            |           |          |
| 4   |          |           |            |           |          |
| 6   |          |           |            |           |          |
| 8   |          |           |            |           |          |
| 1   |          |           |            |           |          |
| 3   |          |           |            |           |          |
| 5   |          |           |            |           |          |
| 7   |          |           |            |           |          |
| 9   |          |           |            |           |          |
| -1  |          |           |            |           |          |
| -3  |          |           |            |           |          |
| -5  |          |           |            |           |          |
| -2  |          |           |            |           |          |
| -4  |          |           |            |           |          |



Find the value of expressions for the given value of  $x$

| $x$ | $x^2$ | $x^3$ | $3x^2$ | $-5x^2$ | $2x^2 + 1$ |
|-----|-------|-------|--------|---------|------------|
| 0   |       |       |        |         |            |
| 2   |       |       |        |         |            |
| 4   |       |       |        |         |            |
| 6   |       |       |        |         |            |
| 8   |       |       |        |         |            |
| 1   |       |       |        |         |            |
| 3   |       |       |        |         |            |
| 5   |       |       |        |         |            |
| 7   |       |       |        |         |            |
| 9   |       |       |        |         |            |
| -1  |       |       |        |         |            |
| -3  |       |       |        |         |            |
| -5  |       |       |        |         |            |
| -2  |       |       |        |         |            |
| -4  |       |       |        |         |            |



Find the value of expressions for the given value of  $x$

| $x$ | $x^2 + 2x$ | $x^2 + x + 1$ | $x^2 - x - 1$ | $x^2 - 2x$ | $x^2 \div 2$ |
|-----|------------|---------------|---------------|------------|--------------|
| 0   |            |               |               |            |              |
| 2   |            |               |               |            |              |
| 4   |            |               |               |            |              |
| 6   |            |               |               |            |              |
| 8   |            |               |               |            |              |
| 1   |            |               |               |            |              |
| 3   |            |               |               |            |              |
| 5   |            |               |               |            |              |
| 7   |            |               |               |            |              |
| 9   |            |               |               |            |              |
| -1  |            |               |               |            |              |
| -3  |            |               |               |            |              |
| -5  |            |               |               |            |              |
| -2  |            |               |               |            |              |
| -4  |            |               |               |            |              |



## Find the Value

1)  $2^2 =$

2)  $2^3 =$

3)  $2^4 =$

4)  $2^5 =$

5)  $2^6 =$

6)  $2^7 =$

7)  $2^8 =$

8)  $2^9 =$

9)  $2^{10} =$

10)  $3^2 =$

11)  $3^3 =$

12)  $3^4 =$

13)  $3^5 =$

14)  $4^2 =$

15)  $4^3 =$

16)  $4^4 =$

17)  $4^5 =$

18)  $5^2 =$

19)  $5^3 =$

20)  $5^4 =$

21)  $5^0 =$

22)  $6^1 =$

23)  $6^2 =$

24)  $6^3 =$

25)  $7^0 =$

26)  $7^2 =$

27)  $7^3 =$

28)  $8^2 =$

29)  $8^3 =$

30)  $9^2 =$

31)  $9^3 =$

32)  $10^2 =$

33)  $10^3 =$

34)  $10^4 =$



Simplify (Write the answers as exponents)

1)  $7^2 \times 7^5 =$

2)  $3^5 \times 3^5 =$

3)  $2^7 \times 2^6 =$

4)  $5^4 \times 5^5 =$

5)  $8^8 \times 8^9 =$

6)  $7^3 \times 7^4 \times 7 =$

7)  $11 \times 11 \times 11^9 =$

8)  $3^3 \times 3^4 \times 3^5 =$

9)  $2^7 \times 2^4 \times 2^2 =$

10)  $5^7 \times 5 \times 5^2 =$

11)  $x^3 \times x^4 =$

12)  $a^5 \times a^3 =$

13)  $n^2 \times n =$

14)  $y^4 \times y^5 =$

15)  $x \times x^4 =$

16)  $y^7 \times y^3 =$

17)  $5^8 \times 25 =$

18)  $2^6 \times 16 =$

19)  $3^9 \times 27 =$

20)  $10^5 \times 1000 =$

21)  $4^4 \times 64 =$

22)  $32 \times 32 =$

23)  $2^{10} \times 8 =$



Simplify (Write the answers as exponents)

1)  $5^8 \div 5^5 =$

2)  $7^7 \div 7^2 =$

3)  $2^{11} \div 2^3 =$

4)  $9^4 \div 9 =$

5)  $8^8 \div 8^2 =$

6)  $15^8 \div 15^{15} =$

7)  $7^5 \div 7^5 =$

8)  $6^{20} \div 6^6 =$

9)  $1 \div 5^5 =$

10)  $3 \div 3^9 =$

11)  $2^8 \div 16 =$

12)  $49 \div 7^7 =$

13)  $27 \div 3^9 =$

14)  $4^{10} \div 16 =$

15)  $1 \div 9^7 =$

16)  $x^5 \div x^2 =$

17)  $a^5 \div a^3 =$

18)  $n^4 \div n =$

19)  $y^7 \div y^2 =$

20)  $x^6 \div x^4 =$

21)  $y^7 \div y^3 =$

22)  $x^2 \div x^7 =$

23)  $y^3 \div y^{11} =$



Simplify (Write the answers as exponents)

$$1) \frac{7^4 \times 7^3}{7} =$$

$$2) \frac{3^4 \times 3^3}{3^2} =$$

$$3) \frac{2^8 \times 2^5}{2^2} =$$

$$4) \frac{5^2 \times 5}{5^3} =$$

$$5) \frac{8^5 \times 8^6}{8^{10}} =$$

$$6) \frac{6^4 \times 6^3}{6^2 \times 6} =$$

$$7) \frac{9^4 \times 9^9}{9^2 \times 9^3} =$$

$$8) \frac{2^9 \times 2^4}{2^5 \times 2^3} =$$

$$9) \frac{5^9 \times 5}{5^3 \times 5^3} =$$

$$10) \frac{6^5 \times 6^6}{6^{10} \times 6} =$$

$$11) \frac{x^7 \times x^4}{x^3 \times x^4} =$$

$$12) \frac{a^7 \times a^3}{a^5 \times a^2} =$$

$$13) \frac{n^8 \times n}{n^2 \times n^2} =$$

$$14) \frac{y^4 \times y^5}{y^2 \times y^3} =$$

$$15) \frac{x^6 \times x^4}{x \times x^3} =$$

$$16) \frac{x^8 \times x^4}{x^3 \times x^4} =$$

$$17) \frac{a^7 \times a^4}{a^5 \times a^2} =$$

$$18) \frac{n^8 \times n}{n^5 \times n^2} =$$

$$19) \frac{y^4 \times y^5}{y^2 \times y^3} =$$



## Simplify Algebraic Expressions

1)  $4y + 11y + 2y =$

2)  $3x + 7x + 2x =$

3)  $2x^2 + 4x^2 + 3x^2 =$

4)  $10x + 5x + 12x =$

5)  $4y + 2y + 6y =$

6)  $4y^2 + 12y^2 + 4y^2 =$

7)  $2y + 6y + 10y =$

8)  $6x + 3x + 10x =$

9)  $5x - x - x =$

10)  $15x - 10x - 5x =$

11)  $12x - 6x + 4x =$

12)  $14x - 5x - 4x =$

13)  $5y + 4y - 3y =$

14)  $y - 10y + 2y =$

15)  $3x - 2x - 2x =$

16)  $7x^2 - 5x^2 - 4x^2 =$

17)  $10y^2 - 8y^2 - 5y^2 =$

18)  $5x - 4x - 4x =$

19)  $-2x - 3x - 4x =$





## Simplify Algebraic Expressions

1)  $-3y^2 - 4y^2 - 2y^2 =$

2)  $x + x + 10 + 5 =$

3)  $y^2 + y^2 + 10 + 2 =$

4)  $x^2 + 4x^2 + 1 + 4 =$

5)  $4y + 5y + 2 + 12 =$

6)  $6y^2 + y^2 + 5 + 15 =$

7)  $x + x + 12 - 3 =$

8)  $12x + 3x + 9 - 5 =$

9)  $7y + 3y + 7 - 3 =$

10)  $5y^2 + 6y^2 + 16 - 6 =$

11)  $4y^2 + 6y^2 + 9 - 2 =$

12)  $x + 4x - 10 - 20 =$

13)  $7y + 2y - 7 - 2 =$

14)  $3x^2 + 13x^2 - 13 - 12 =$

15)  $4y^2 + 8y^2 - 6 - 6 =$

16)  $7y + 8y - 5 - 6 =$

17)  $x^2 + x^2 + x^2 =$

18)  $x^2 + x^2 + x =$

19)  $2x + 3x + 7x =$



## Simplify Algebraic Expressions

1)  $4x^2 + 9x^2 + 4x =$

2)  $5x + 3x + 7x =$

3)  $7y + 5y + 2y =$

4)  $3x + 3y + 3x =$

5)  $4x^2 + 2x^2 + 2 + 4 =$

6)  $9x^2 + x^2 + 7 + 10 =$

7)  $3x^2 + 10x^2 + x^2 + 11 + 9 =$

8)  $7y^2 + 4y^2 + 11 + 4 =$

9)  $3y^2 + 4y^2 + 5y^2 =$

10)  $4y^2 + 10 - 2y^2 - 5 =$

11)  $5y^2 - y^2 + 5 - 1 =$

12)  $20y^2 - 10y^2 + 20 - 10 =$

13)  $2y^2 - y^2 - 10 - 10 =$

14)  $3y^2 + 2y^2 - 3 - 2 =$

15)  $4x + 5x - 3y - 2y =$

16)  $5x^2 + 3x^2 + 5y^2 - 3y^2 =$

17)  $4x^2 + 5x^2 - 2y^2 - 5y^2 =$

18)  $3x^2 + x^2 - y^2 - y^2 =$

19)  $7x^2 + 4x^2 - 7y^2 + 4y^2 =$



## Add the Algebraic Expressions

1)  $(2x + 3) + (3x + 5) =$

2)  $(7x + 5) + (x + 1) =$

3)  $(10x + 3) + (2x + 31) =$

4)  $(5x + 8) + (4x + 3) =$

5)  $(4x + 3) + (2x + 8) =$

6)  $(3x - 3) + (7x - 9) =$

7)  $(6x - 6) + (x - 1) =$

8)  $(10x - 3) + (2x - 9) =$

9)  $(7x + 8) + (3x - 3) =$

10)  $(8x + 13) + (3x - 3) =$

11)  $(x^2 + 2x - 3) + (x^2 + 7x - 5) =$

12)  $(3x^2 + 7x + 3) + (x^2 + 2x + 3) =$

13)  $(7x^2 - 9x + 8) + (3x^2 + 7x - 7) =$

14)  $(4x^2 + 5x - 9) + (2x^2 + 2x - 5) =$

15)  $(x^2 - 2x - 3) + (8x^2 - 7x - 5) =$



## Add the Algebraic Expressions - 2

1)  $(4x + 3) + (2x + 3) + (3x + 5) =$

2)  $(3x + 3) + (7x + 5) + (x + 1) =$

3)  $(4x + 8) + (10x + 3) + (2x + 31) =$

4)  $(5x + 8) + (x + 1) + (4x + 3) =$

5)  $(4x + 3) + (2x + 8) + (2x + 8) =$

6)  $(x + y + 2) + (2x + 3y + 7) =$

7)  $(7x + 2y + 4) + (2x + 4y + 5) =$

8)  $(3x + 6y + 5) + (6x + 3y + 4) =$

9)  $(7x + 4y + 15) + (8x + 3y + 5) =$

10)  $(6x + 2y + 7) + (5x + 9y + 9) =$

11)  $(x - 3y - 5) + (3x - 5y - 7) =$

12)  $(2x - 5y + 15) + (7x + 5y - 17) =$

13)  $(5x + 5y - 9) + (2x - 3y + 9) =$

14)  $(4x - 5y + 6) + (3x + 8y - 11) =$

15)  $(9x - 7y - 7) + (4x + 7y - 7) =$



## Add the Algebraic Expressions - 3

1)  $(x + y + 1) + (2x + 4y + 5) + (4x + 5y + 3) =$

2)  $(2x + 3y + 4) + (3x + 2y + 7) + (5x + 4y + 3) =$

3)  $(6x - 2y + 7) + (5x + 4y + 6) + (2x + 3y - 3) =$

4)  $(3x - 2y + 5) + (4x - 6y - 6) + (x + 3y - 3) =$

5)  $(9x - 4y + 7) + (2x + 2y + 3) + (3x + 3y + 2) =$

6)  $(x - y - 1) + (3x - 3y + 5) + (6x + 4y - 3) =$

7)  $(2x - 3y + 4) + (3x + 2y - 7) + (5x - 4y + 3) =$

8)  $(3x - 2y + 10) + (5x + 4y - 7) + (2x - 3y - 3) =$

9)  $(3x - 3y + 4) + (8x - 4y - 3) + (x + 7y - 1) =$

10)  $(5x - 6y - 7) + (x + 2y + 7) + (3x + 4y + 12) =$

11)  $(x^2 + 2x + 3) + (4x^2 + 7x + 3) + (x^2 + 7x + 5) =$

12)  $(3x^2 + 7x + 3) + (2x^2 + 3x + 4) + (3x^2 + 2x + 3) =$



## Add the Algebraic Expressions - 4

1)  $(2x^2 + 3x + 4) + (7x^2 + 2x + 4) + (3x^2 + 7x + 4) =$

2)  $(3x^2 + 4x + 1) + (4x^2 + 5x + 9) + (2x^2 + 2x + 2) =$

3)  $(2x^2 - 3x - 4) + (x^2 - 2x - 3) + (8x^2 - 7x - 5) =$

4)  $(y^2 - 2y + 3) + (y^2 + 7y - 6) + (y^2 - 3y + 5) =$

5)  $(y^2 - 5y - 3) + (2y^2 + 4y - 4) + (2y^2 - 2y + 5) =$

6)  $(2y^2 - 3y + 9) + (7y^2 + 2y - 4) + (3y^2 + 7y - 3) =$

7)  $(3y^2 - 2y + 1) + (4y^2 - 3y + 5) + (2y^2 + 4y + 2) =$

8)  $(2y^2 - 3y - 4) + (y^2 + 2y - 3) + (5y^2 - 4y + 5) =$

9)  $(6x^2 - 3x - 8) + (2x^2 + 2x + 3) + (8x^2 - 7x + 5) =$

10)  $(2x^2 + 5x - 3) + (x^2 - x - 3) + (8x^2 - 8x - 9) =$

11)  $(12x^2 - 7x - 4) + (3x^2 - 2x - 3) + (4x^2 + 7x - 5) =$

12)  $(5x^2 - 8x - 4) + (2x^2 + 2x + 6) + (4x^2 - 9x + 10) =$



## Subtraction of Algebraic Expressions

1)  $(5x + 8) - (3x + 5) =$

2)  $(7x + 5) - (x + 1) =$

3)  $(10x + 31) - (2x + 11) =$

4)  $(5x + 8) - (3x + 3) =$

5)  $(4x + 13) - (2x + 8) =$

6)  $(13x - 3) - (7x - 9) =$

7)  $(6x - 6) - (x - 1) =$

8)  $(10x - 3) - (2x - 7) =$

9)  $(7x + 8) - (3x - 3) =$

10)  $(8x + 13) - (3x - 3) =$

11)  $(9x^2 + 9x + 9) - (x^2 + 7x + 5) =$

12)  $(5x^2 + 7x + 3) - (x^2 + 2x + 1) =$

13)  $(7x^2 + 9x + 8) - (x^2 + 2x + 7) =$

14)  $(3x^2 + 5x + 9) - (2x^2 + 2x + 5) =$

15)  $(11x^2 + 12x + 6) - (8x^2 + 7x + 5) =$



## Subtraction of Algebraic Expressions - 2

- 1)  $(3x^2 + 2x - 3) - (x^2 + 7x - 5) =$
- 2)  $(3x^2 - 7x + 3) - (x^2 + 2x + 1) =$
- 3)  $(7x^2 - 9x + 8) - (3x^2 + 7x - 7) =$
- 4)  $(4x^2 + 5x - 9) - (2x^2 + 2x - 5) =$
- 5)  $(11x^2 - 2x - 3) - (8x^2 - 7x - 5) =$
- 6)  $(6x^2 + 2x - 6) - (x^2 + 2x - 5) =$
- 7)  $(2x^2 + 7x + 13) - (2x^2 + 5x + 1) =$
- 8)  $(9x^2 - 9x + 6) - (3x^2 - 9x - 6) =$
- 9)  $(9x^2 + 7x - 9) - (6x^2 + 2x - 9) =$
- 10)  $(9x^2 - 2x - 7) - (8x^2 - 5x - 5) =$
- 11)  $(5x + 3y + 2) - (2x + 3y + 7) =$
- 12)  $(7x + 2y + 4) - (2x + 4y + 5) =$
- 13)  $(7x + 6y + 5) - (6x + 3y + 4) =$
- 14)  $(17x + 4y + 15) - (8x + 3y + 5) =$
- 15)  $(6x + 2y + 7) - (5x + 9y + 9) =$





## Multiply

1)  $2 \cdot 3x =$

2)  $3 \cdot 4y =$

3)  $6 \cdot 11y =$

4)  $7 \cdot 7x =$

5)  $10 \cdot 12y =$

6)  $3 \cdot 4x^2 =$

7)  $4 \cdot 2y^2 =$

8)  $2 \cdot 8x^2 =$

9)  $7 \cdot 11x^2 =$

10)  $5 \cdot 5y^2 =$

11)  $2x \cdot 4x =$

12)  $4x \cdot 6x =$

13)  $12x \cdot 2x =$

14)  $5x \cdot 6x =$

15)  $3x \cdot 7x =$

16)  $2x \cdot 3y =$

17)  $10x \cdot 5y =$

18)  $4y \cdot 2x =$

19)  $3y \cdot 7x =$

20)  $9y \cdot 6x =$

21)  $3x \cdot 4x^2 =$

22)  $5y \cdot 3y^2 =$

23)  $4y \cdot 4y^2 =$

24)  $7x \cdot 4x^2 =$

25)  $11x \cdot 3x^2 =$

26)  $4(x + 3) =$

27)  $7(2x + 7) =$

28)  $3(6x + 5) =$

29)  $2(20y + 10) =$



## Multiply - 2

1)  $5(9y + 12) =$

2)  $3(y - 5) =$

3)  $6(2x - 5) =$

4)  $8(6x - 4) =$

5)  $11(4y - 9) =$

6)  $9(9x - 8) =$

7)  $2y \cdot (2x + 3) =$

8)  $4x \cdot (5y - 6) =$

9)  $7x \cdot (7y - 8) =$

10)  $8y \cdot (4x + 1) =$

11)  $2y \cdot (5x - 9) =$

12)  $2x(2x + 3) =$

13)  $3y(3y + 5) =$

14)  $3x(7x + 8) =$

15)  $3y \cdot 4x^2 =$

16)  $7x \cdot 3y^2 =$

17)  $4x \cdot 6y =$

18)  $5x^2 \cdot 2y^2 =$

19)  $4x^2 \cdot 9y =$

20)  $2x \cdot 4xy =$

21)  $3x \cdot 9xy =$

22)  $10y \cdot 10xy =$

23)  $4x \cdot 5x^2y =$

24)  $6y \cdot 3x^2y^2 =$

25)  $3y \cdot 4x^2 =$

26)  $7x^2 \cdot 5y^2 =$

27)  $11x^2 \cdot 5y =$

28)  $5y^2 \cdot 10x^3 =$

29)  $20x^2 \cdot 10xy =$



## Multiply - 3

1)  $4(2x^2 + 3x + 4) =$

2)  $5(3x + 2y + 4) =$

3)  $7(4y^2 + y + 2) =$

4)  $3(7y^2 + 4y + 9) =$

5)  $2(9x - 3y + 2) =$

6)  $4(4x^2 - 3x - 2) =$

7)  $5(4x^2 - 3y^2 + 15) =$

8)  $11(4y^2 + 7y - 2) =$

9)  $9(x - y - 5) =$

10)  $20(4x + 3y - 5) =$

11)  $4x(2x^2 + 4x - 3) =$

12)  $2y(7y^2 + 4y + 5) =$

13)  $6x(2x^2 - 4x - 6) =$

14)  $y(y^2 - y - 1) =$

15)  $3y(6y^2 - 5y + 9) =$

16)  $x^2(5x + 99) =$

17)  $3y^2(3y - 9) =$

18)  $2x^2(3x + 5) =$

19)  $5y^2(6y + 4) =$

20)  $9y^2(9y - 7) =$

21)  $2y \cdot (2x + 3) =$

22)  $4x \cdot (5y - 6) =$

23)  $7x \cdot (7y - 8) =$



## Multiply - 4

1)  $8y \cdot (4x + 1) =$

2)  $2y \cdot (5x - 9) =$

3)  $4y(2x^2 + 4x - 3) =$

4)  $5x \cdot (2y^2 - 4y + 3) =$

5)  $7x \cdot (y^2 + 2y - 10) =$

6)  $8y \cdot (5x^2 - 6x + 9) =$

7)  $4y \cdot (3x^2 - 8x - 8) =$

8)  $2y^2 \cdot (3x + 5) =$

9)  $x^2 \cdot (21y - 27) =$

10)  $5y^2 \cdot (5x + 9) =$

11)  $9x^2 \cdot (3y - 8) =$

12)  $7y^2 \cdot (7x - 4) =$

13)  $2y^2 \cdot (2x^2 + 3x + 5) =$

14)  $5y^2 \cdot (x^2 - 9x - 5) =$

15)  $5x^2 \cdot (4y^2 - 7y + 8) =$

16)  $7y^2 \cdot (3x^2 - 5x - 11) =$

17)  $9x^2 \cdot (2y^2 - 7y + 5) =$

18)  $4y \cdot (2x + 4y - 3) =$

19)  $5x \cdot (5x - 6y + 8) =$

20)  $3x \cdot (9x + 2y - 5) =$

21)  $8y \cdot (6x + 6y - 9) =$

22)  $7y \cdot (5x + 4y - 8) =$

23)  $8x^2 \cdot (3y^2 - 11) =$



## Division

1)  $\frac{8x}{2} =$

2)  $\frac{12y}{4} =$

3)  $\frac{66y}{6} =$

4)  $\frac{49x}{7} =$

5)  $\frac{120y}{10} =$

6)  $\frac{20x^2}{5} =$

7)  $\frac{8y^2}{4} =$

8)  $\frac{16x^2}{2} =$

9)  $\frac{77x^2}{7} =$

10)  $\frac{25y^2}{5} =$

11)  $\frac{8x}{2x} =$

12)  $\frac{24x}{4x} =$

13)  $\frac{22x}{2x} =$

14)  $\frac{30x}{6x} =$

15)  $\frac{21x}{7x} =$

16)  $\frac{4x^2}{x} =$

17)  $\frac{15y^2}{5y} =$

18)  $\frac{4y^2}{4y} =$

19)  $\frac{28x^2}{7x} =$

20)  $\frac{33x^2}{3x} =$

21)  $\frac{4x + 12}{4} =$

22)  $\frac{15x^2y}{5xy} =$

23)  $\frac{28x^2y^2}{4y^2} =$

24)  $\frac{39x^2y^2}{13xy^2} =$

25)  $\frac{27x + 18}{9} =$



## Division - 2

1)  $\frac{14x + 49}{7} =$

2)  $\frac{18x + 15}{3} =$

3)  $\frac{40y + 20}{2} =$

4)  $\frac{45y + 60}{5} =$

5)  $\frac{3y - 15}{3} =$

6)  $\frac{12x - 30}{6} =$

7)  $\frac{48x - 32}{8} =$

8)  $\frac{44y - 99}{11} =$

9)  $\frac{81x - 72}{9} =$

10)  $\frac{8x^2 + 12x + 16}{4} =$

11)  $\frac{15x + 10y + 20}{5} =$

12)  $\frac{28y^2 + 7y + 14}{7} =$

13)  $\frac{21y^2 + 12y + 27}{3} =$

14)  $\frac{18x - 6y + 4}{2} =$

15)  $\frac{16x^2 - 12x - 8}{4} =$

16)  $\frac{20x^2 - 15y^2 + 75}{5} =$

17)  $\frac{44y^2 + 77y - 22}{11} =$



## Division - 3

1)  $\frac{4x^2 + 6x}{2x} =$

2)  $\frac{9y^2 + 15y}{3y} =$

3)  $\frac{21x^2 + 24x}{3x} =$

4)  $\frac{345y^2 - 55y}{5y} =$

5)  $\frac{42y^2 - 35y}{7y} =$

6)  $\frac{8x^3 + 16x^2 - 12x}{4x} =$

7)  $\frac{y^3 - y^2 - y}{y} =$

8)  $\frac{5x^3 + 99x^2}{x^2} =$

9)  $\frac{9y^3 - 27y^2}{3y^2} =$

10)  $\frac{6x^3 + 10x^2}{2x^2} =$

11)  $\frac{30y^3 + 20y^2}{5y^2} =$

12)  $\frac{81y^3 - 63y^2}{9y^2} =$

13)  $\frac{3x \cdot (x + 1)}{x + 1} =$

14)  $\frac{7y \cdot (x - 5)}{x - 5} =$

15)  $\frac{4y \cdot (x + 4)}{x + 4} =$

16)  $\frac{9y \cdot (x + 1)}{3y} =$

17)  $\frac{(3x - 5) \cdot (4x + 5)}{4x + 5} =$



Find the number of terms and degree of the algebraic expressions.

|    | Expression                 | No. of Terms | Degree |
|----|----------------------------|--------------|--------|
| 1  | $4x^2y$                    |              |        |
| 2  | $2x^2$                     |              |        |
| 3  | $3x^2y + 7xy - 5x + 6$     |              |        |
| 4  | $8$                        |              |        |
| 5  | $x^2 + y^2$                |              |        |
| 6  | $x^4 + y^4 + 5$            |              |        |
| 7  | $x^2 + y^2 + xy + 10$      |              |        |
| 8  | $x^2 + y^2 + 25$           |              |        |
| 9  | $x^3 - 10$                 |              |        |
| 10 | $5x^2 + 10xy + 25y^2 - 20$ |              |        |
| 11 | $x^2 + y^2 + 10xy - 10$    |              |        |
| 12 | $3xy + 3$                  |              |        |
| 13 | $5x^2 + 4y^2 + 3z^2 + 100$ |              |        |
| 14 | $x^2 + x + 1$              |              |        |
| 15 | $10 - 2x^2 - 5y^2 + 20x$   |              |        |





Find the number of factors, and co-efficient of the underlined terms.

|    | Expression                             | No. of factors | Co-efficient |
|----|----------------------------------------|----------------|--------------|
| 1  | $x^2 + \underline{y^2} + xy + 10$      |                |              |
| 2  | $x^2 + y^2 + \underline{xy} + 10$      |                |              |
| 3  | $5x^2 + \underline{10xy} + 25y^2 - 20$ |                |              |
| 4  | $\underline{x^3} - 10$                 |                |              |
| 5  | $x^4 + \underline{y^4} + 5$            |                |              |
| 6  | $\underline{x^2y^2} + 100$             |                |              |
| 7  | $\underline{x^3} + x^2$                |                |              |
| 8  | $5x^2 + \underline{10xy} + 25y^2 - 20$ |                |              |
| 9  | $x^2 + \underline{y^2}$                |                |              |
| 10 | $\underline{3x^3} - 2x^2 - 100$        |                |              |
| 11 | $\underline{10x^3} + 5x^2 - 2x + 19$   |                |              |
| 12 | $\underline{3y^2} - 2y - 100$          |                |              |
| 13 | $5x^2 + \underline{17x} + 23$          |                |              |
| 14 | $5y^2 - \underline{4xy} + 5x^2$        |                |              |
| 15 | $5x^3 + \underline{4x^2y} + 3y^4$      |                |              |



## Match Like Terms

|         |        |
|---------|--------|
| $4x$    | $y$    |
| $11y$   | $7x$   |
| $75$    | $x^2$  |
| $13x^2$ | $100$  |
| $y^2$   | $2y^2$ |

|           |            |
|-----------|------------|
| $11xy^2$  | $10x^2y$   |
| $9x^2y$   | $7xy^2$    |
| $75xy$    | $2x^2$     |
| $15x^2$   | $10xy$     |
| $7x^2y^2$ | $11x^2y^2$ |

|           |            |
|-----------|------------|
| $5xy$     | $12x^2$    |
| $19x^2$   | $10x^2y$   |
| $54$      | $12xy$     |
| $6x^2y$   | $45$       |
| $8x^2y^2$ | $21x^2y^2$ |

|          |          |
|----------|----------|
| $0.5$    | $7x^3$   |
| $xy^2$   | $10x^2$  |
| $-7x^2$  | $-9xy^2$ |
| $-10x^3$ | $-8x^2y$ |
| $4x^2y$  | $200$    |

|         |         |
|---------|---------|
| $y$     | $5xy^2$ |
| $-7y^2$ | $y^2$   |
| $4xy^2$ | $10$    |
| $6$     | $-xy$   |
| $6xy$   | $-7y$   |

|            |          |
|------------|----------|
| $77x^2y^2$ | $x^2y^2$ |
| $xy$       | $77xy$   |
| $73$       | $18$     |
| $-9x^3$    | $-7x^3$  |
| $15x^2y$   | $17x^2y$ |



## Write math expression from statements

- 1)  $p$  multiplied by  $-5$
- 2) 11 added to  $2m$
- 3) 11 subtracted from  $2m$
- 4) 5 times  $y$  to which 3 is added
- 5) 5 times  $y$  from which 3 is subtracted
- 6)  $y$  is multiplied by  $-8$
- 7)  $y$  is multiplied by  $-8$  and then 5 is added to the result
- 8)  $y$  is multiplied by 5 and the result is subtracted from 16
- 9)  $y$  is multiplied by  $-5$  and the result is added to 16
- 10) 7 added to  $p$
- 11) 7 subtracted from  $-m$
- 12)  $-p$  multiplied by 5
- 13)  $-p$  divided by 5



## Write math expression from statements

- 1) The sum of three times  $x$  and 11 is 32.
- 2) If you subtract 5 from 6 times a number, you get 7.
- 3) One fourth of  $m$  is 3 more than 7.
- 4) One third of a number plus 5 is 8.
- 5) The sum of numbers  $x$  and 4 is 9.
- 6) 2 subtracted from  $y$  is 8.
- 7) Ten times  $a$  is 70.
- 8) The number  $b$  divided by 5 gives 6.
- 9) Three-fourth of  $t$  is 15.
- 10) Seven times  $m$  plus 7 gets you 77.
- 11) One-fourth of a number  $x$  minus 4 gives 4.
- 12) If you take away 6 from 6 times  $y$ , you get 60.
- 13) If you add 3 to one-third of  $z$ , you get 30.



## Write math expression from statements

- 1) Subtract 5 from the sum of  $x$  and  $y$ .
- 2) Add 2 times  $p$  to three times  $q$ .
- 3) Add three times the product of  $a$  and  $b$  to half of  $d$ .
- 4) Divide the difference of  $l$  and  $m$  by the difference of  $p$  and  $q$ .
- 5) Add two variables  $p$  and  $q$ .
- 6) Subtract 2 from  $z$ .
- 7) Add 3 to the product of 7 and  $z$ .
- 8) Multiplying  $x$  by 3, subtract 2 from the product thus obtained.
- 9) Divide the difference of  $p$  and  $q$  by 3
- 10) Diameter of a circle is double of its radius.
- 11) One-third of the age of any person.
- 12) If you know the cost of one kg of rice, then find the cost of 5 kg of rice.



Draw a box around Expressions, underline the Equations and circle the Inequalities

1)  $x = 100$

2)  $x - 20 = 0$

3)  $x \leq 5$

4)  $x > 0$

5)  $x \neq 10$

6)  $x + 100 = 120$

7)  $x - y = 10$

8)  $2x + y = 0$

9)  $x + y$

10)  $a + 2b$

11)  $a - 20$

12)  $x + 50$

13)  $200 + 1$

14)  $x \leq y$

15)  $x - y \leq 50$

16)  $x = -y$

17)  $x + y \geq 50$

18)  $500 \times 10$

19)  $x + y = 100$

20)  $1000 - y$

21)  $x^2 + x - 12 = 0$

22)  $x^2 + xy + y^2$

23)  $x^2 + y^2 + 2xy$

24)  $4a = 3b$

25)  $4a + 3b$

26)  $4a < 3b$

27)  $x^2 + y^2 - 2xy$

28)  $x \neq 0$

29)  $A = P + I$



Find the value of  $x$

1)  $x - 10 = 0$

2)  $x - 104 = 0$

3)  $x - 5 = 5$

4)  $x - 7 = 10$

5)  $x - 20 = 0$

6)  $2x = 12$

7)  $3x = 6$

8)  $5x = 10$

9)  $5x = 15$

10)  $7x = 21$

11)  $3x = 15$

12)  $x - 20 = 0$

13)  $x - 3 = 3$

14)  $x - 10 = 1$

15)  $10x = 40$

16)  $2x - 12 = 0$

17)  $3x - 6 = 0$

18)  $5x - 10 = 0$

19)  $5x - 15 = 0$

20)  $7x - 21 = 0$

21)  $\frac{x}{3} = 1$

22)  $\frac{x}{3} = 2$

23)  $\frac{x}{2} = 1$

24)  $\frac{x}{5} = 0$

25)  $\frac{x}{4} = 1$

26)  $x + 10 = 0$

27)  $x + 104 = 0$

28)  $x + 5 = 5$

29)  $x + 7 = 10$



Find the value of  $x$

1)  $x + 20 = 0$

2)  $x - 3 = -7$

3)  $x - 7 = -17$

4)  $x + 10 = -10$

5)  $x + 3 = 0$

6)  $x - 10 = -20$

7)  $5 - x = 2$

8)  $5 + x = 0$

9)  $10 - x = 1$

10)  $x - 5 = -10$

11)  $x + 21 = 0$

12)  $x + x = 10$

13)  $x + x = 22$

14)  $2x + x = 9$

15)  $x + 2x = 36$

16)  $2x + 2x = 16$

17)  $3x - 2x = 5$

18)  $7x - 3x = 20$

19)  $11x - 9x = 2$

20)  $5x - x = 12$

21)  $6x - 2x = 16$

22)  $2x - 4x = 12$

23)  $5x - x - 2x = 6$

24)  $2x - 10 = 0$

25)  $3x - 21 = 0$

26)  $3x + 6x = 27$

27)  $7y - 3y = 40$

28)  $7y + 3y = 50$

29)  $7y + y = 88$





Complete the table

|    | Expressions            | HCF | LCM |
|----|------------------------|-----|-----|
| 1  | $2x, 4$                |     |     |
| 2  | $5xy, 10x$             |     |     |
| 3  | $12a^2b, 15ab^2$       |     |     |
| 4  | $10x^2, -18x^3, 14x^4$ |     |     |
| 5  | $12x, 36$              |     |     |
| 6  | $22y, -33z$            |     |     |
| 7  | $14pq, 35pqr$          |     |     |
| 8  | $7x, -42$              |     |     |
| 9  | $7a^2, 14a$            |     |     |
| 10 | $-16z, 20z^3$          |     |     |
| 11 | $20l^2m, 30alm$        |     |     |
| 12 | $5x^2y, 15xy^2$        |     |     |
| 13 | $10a^2, -15b^2, 20c^2$ |     |     |
| 14 | $-4a^2, 4ab, -4ca$     |     |     |
| 15 | $x^2yz, xy^2z, xyz^2$  |     |     |



Complete the table

|    | Expressions                       | HCF | LCM |
|----|-----------------------------------|-----|-----|
| 1  | $2x, 4x, 8x$                      |     |     |
| 2  | $3x^2, 6x^2, 12x^2$               |     |     |
| 3  | $2xy, 3xy, 4xy$                   |     |     |
| 4  | $4y, 5y, -4y$                     |     |     |
| 5  | $14y^2, 21y^2, -2y^2$             |     |     |
| 6  | $8x^2y, 16xy, 24x^2y$             |     |     |
| 7  | $-22xy^2, 5xy^2, 11xy^2$          |     |     |
| 8  | $5xy, 5yz, 5zx$                   |     |     |
| 9  | $10x^2yz, 15xy^2z, 20xyz^2$       |     |     |
| 10 | $15y^2, -6y, -18y^3$              |     |     |
| 11 | $21x, 42x, 63$                    |     |     |
| 12 | $20x^2y^2z, 2xy^2z^2, 4x^2y^2z^2$ |     |     |
| 13 | $12y^2z^2, 36y^2z^2, 18y^2z$      |     |     |
| 14 | $27xyz, 9xy^2z, 18xy^2$           |     |     |
| 15 | $4x^2y, 28xy^2, 7x^2y^2z^2$       |     |     |



Extract Common Factors and write with brackets

1)  $2x + 4$

2)  $5xy + 10x$

3)  $12a^2b + 15ab^2$

4)  $10x^2 - 18x^3 + 14x^4$

5)  $12x + 36$

6)  $22y - 33z$

7)  $14pq + 35pqr$

8)  $7x - 42$

9)  $6p - 12q$

10)  $7a^2 + 14a$

11)  $-16z + 20z^3$

12)  $20l^2m + 30alm$

13)  $5x^2y - 15xy^2$

14)  $10a^2 - 15b^2 + 20c^2$

15)  $-4a^2 + 4ab - 4ca$

16)  $x^2yz + xy^2z + xyz^2$

17)  $ax^2y + bxy^2 + cxyz$

18)  $16y^3 - 4y^2 + 32y$

19)  $10xy + 20yz - 30xz$

