

NEW ERA PUBLIC SCHOOL

Subject: Math

Class: 5th

SESSION: 2021

Solved Assignment of Term 2nd

TOPIC: DECIMALS [Math A]

Exercise: 40

Write each shaded part as a decimal.

$$\begin{aligned} 1. \quad 3 + \frac{4}{10} &= 3 + 0.4 \\ &= 3.4 \end{aligned}$$

$$2. \quad \frac{8}{10} = 0.8$$

$$\begin{aligned} 3. \quad 2 + \frac{6}{10} &= 2 + 0.6 \\ &= 2.6 \end{aligned}$$

Exercise: 41

Write the shaded part in decimals.

$$1. \quad 1 + 1 + 1 + \frac{2}{10}$$

$$\begin{aligned} \text{sol:} \quad 3 + \frac{2}{10} &= 3 + 0.2 \\ &= 3.2 \end{aligned}$$

$$2. \quad 1 + 1 + \frac{2}{10} + \frac{3}{100}$$

$$\begin{aligned} \text{sol: } 2 + \frac{2}{10} + \frac{3}{100} &= 2 + 0.2 + 0.03 \\ &= 2.23 \end{aligned}$$

$$3. \quad 1 + \frac{34}{100}$$

$$\begin{aligned} \text{sol: } 1 + 0.34 \\ &= 1.34. \end{aligned}$$

$$4. \quad \frac{6}{10} + \frac{9}{100}$$

$$\begin{aligned} \text{sol: } 0.6 + 0.09 \\ &= 0.69. \end{aligned}$$

Exercise $\rightarrow$ 42

Expand. [Practice remaining parts yourself].

$$1. \quad 4.21$$

$$\text{sol: } 4 + \frac{2}{10} + \frac{1}{100}$$

$$3. \quad 1.28$$

$$\text{sol: } 1 + \frac{2}{10} + \frac{8}{100}$$

$$5. \quad 9.3$$

$$\text{sol: } 9 + \frac{3}{10}$$

7. 20.08
 sol: $20 + \frac{8}{100}$

6. 32.01
 sol: $30 + 2 + \frac{1}{100}$

Exercise :→ 43

Express each one as a decimal number.

[practise remaining part yourself].

1. $25 + \frac{3}{10} + \frac{7}{100} = 25.37$
 Tens Ones Tenths Hundredths

3. $1 + \frac{3}{10} + \frac{1}{100} + \frac{3}{1000} = 1.313$
 ones Tenths Hundredths Thousandths

5. $27 + \frac{3}{10} + \frac{5}{100} = 27.35$
 Tens Ones Tenths Hundredths

7. $4 + \frac{9}{100} + \frac{3}{1000} = 4.093$
 ones Tenths Hundredths Thousandths

9. $\frac{3}{10} + \frac{6}{1000} = 0.306$
 ones Tenths Hundredths Thousandths

10. $2 + \frac{6}{100} + \frac{0}{1000} = 2.06$
 Tens Ones Tenths Hundredths

Definitions:→

1. Like decimals:→ Some decimals have the same number of decimal places, like

$$0.2, 3.3, 8.8 = 1 \text{ decimal place}$$

$$3.62, 16.18, 112.21 = 2 \text{ decimal places.}$$

these are called like decimals.

2. Unlike decimals:→ Decimals that carry different numbers of decimal places are called unlike decimals, e.g.

$$0.6, 3.14, 1.234.$$

Exercise:→ 44

Write the equivalent decimals.

$$1. 0.3 = 0.30 = 0.300$$

$$2. 2.4 = 2.40 = 2.400$$

$$3. 38.6 = 38.60 = 38.600$$

$$4. 72.9 = 72.90 = 72.900$$

Exercise:→ 45

Change into like decimals.

$$1. 0.13 = 0.130$$

$$21.4 = 21.400$$

$$8.213 = 8.213$$

$$2. 2.004 = 2.004$$

$$8.65 = 8.650$$

$$7.1 = 7.100$$

$$\begin{array}{rcl}
 3. & 8.1 & = 8.10 \\
 & 8.14 & = 8.14 \\
 & 9.88 & = 9.88
 \end{array}$$

$$\begin{array}{rcl}
 4. & 343.123 & = 343.123 \\
 & 31.18 & = 31.180 \\
 & 18.01 & = 18.010
 \end{array}$$

Exercise $\Rightarrow$ 46

Q.1: $\rightarrow$ Compare the decimals using $>$, $=$ or $<$.

(a) $7.36 < 7.48$

(c) $19.07 > 19.06$

(e) $0.368 < 0.683$

(g) $8.12 > 8.012$

(i) $0.86 < 0.9$

(k) $0.2 < 1.895$

Q.2. Rearrange in ascending order.

(a) $5.12 \quad 5.21 \quad 5.3 \quad 5$

sol: $5 < 5.12 < 5.21 < 5.3$

(c) $0.03 \quad 1.03 \quad 0.13 \quad 1.13$

sol: $0.03 < 0.13 < 1.03 < 1.13$

(e) $24.18 \quad 29.13 \quad 24.8 \quad 29.3$

sol: $24.18 < 24.8 < 29.13 < 29.3$

(g) 25.36 24.18 29.38 25.49
 sol: $24.18 < 25.36 < 25.49 < 29.38$

Q.3: Rearrange in descending order.

(a) 7.63 70.003 7.6 70.21
 sol: $70.21 > 70.003 > 7.63 > 7.6$

(c) 7.9 9.77 9.07 7.09
 sol: $9.77 > 9.07 > 7.9 > 7.09$

(e) 49.4 4.935 49.35 4.96
 sol: $49.4 > 49.35 > 4.96 > 4.935$

Q.4: Write the next three numbers in the series.

(a) 7.01, 7.02, 7.03, 7.04, 7.05, 7.06

(c) 5.02, 5.03, 5.04, 5.05, 5.06, 5.07

(e) 9.001, 9.002, 9.003, 9.004, 9.005, 9.006

Exercise $\Rightarrow$ 47

Add: $\rightarrow$ [Practice remaining parts yourself].

1. $27.02 + 28.1$

sol:
$$\begin{array}{r} 27.02 \\ + 28.1 \\ \hline 55.12 \end{array}$$

2. $153.1 + 18.31$

sol:
$$\begin{array}{r} 153.1 \\ + 18.31 \\ \hline 171.41 \end{array}$$

3. $19 + 3.803$

sol:

$$\begin{array}{r} 19 \\ + 3.803 \\ \hline 22.803 \end{array}$$

4. $30.05 + 25.5$

sol:

$$\begin{array}{r} 30.05 \\ + 25.5 \\ \hline 55.55 \end{array}$$

5. $254.2 + 28.51$

sol:

$$\begin{array}{r} 254.2 \\ + 28.51 \\ \hline 282.71 \end{array}$$

6. $29 + 4.732$

sol:

$$\begin{array}{r} 29 \\ + 4.732 \\ \hline 33.732 \end{array}$$

7. $23.01 + 2.2 + 1.983$

sol:

$$\begin{array}{r} 23.01 \\ 2.2 \\ + 1.983 \\ \hline 27.193 \end{array}$$

Exercise $\rightarrow$ 48

Subtract $\rightarrow$ [Practise remaining parts your-self]

1. $8.21 - 4.05$

sol:

$$\begin{array}{r} 8.21 \\ - 4.05 \\ \hline 4.16 \end{array}$$

2. $9.64 - 3.328$

sol:

$$\begin{array}{r} 9.640 \\ - 3.328 \\ \hline 6.312 \end{array}$$

3. $0.83 - 0.612$

sol:

$$\begin{array}{r} 0.830 \\ - 0.612 \\ \hline 0.218 \end{array}$$

4. $9.09 - 3.01$

sol:

$$\begin{array}{r} 9.09 \\ - 3.01 \\ \hline 6.08 \end{array}$$

5. $87.54 - 16.324$

sol:

$$\begin{array}{r} 87.540 \\ - 16.324 \\ \hline 71.216 \end{array}$$

6. $93.54 - 66.66$

sol:

$$\begin{array}{r} 93.54 \\ - 66.66 \\ \hline 26.88 \end{array}$$

Exercise $\rightarrow$ 49

Q.1: Question on book.

Sol: Sweets bought by Meetu = 200.2 g

Sweets bought by Varsha = $+150.55\text{ g}$

$\therefore$ Total Sweets bought in all = 350.75 g

Q.2: Question on book.

Sol: Water needed in a recipe = 120.12 ml

Milk Cream needed in a recipe = $+68.8\text{ ml}$

$\therefore$ Total Water and milk Cream needed = 188.92 ml

Q.3: Question on book.

Sol: Rain fell on Monday = 12.6 mm

Rain fell Today = $+2.88\text{ mm}$

$\therefore$ Total rain fell in 2 days = 15.48 mm

Q.4: Question on book.

Sol: Weight of empty box = 1.12 Kg

Weight of apples = $+2.252\text{ Kg}$

$\therefore$ Total Weight of box = 3.372 Kg

Q.5: Question on book.

Sol: Weight of one turtle = 6.070 Kg

Weight of second turtle = -5.992 Kg

$\therefore$ Difference of their Weight = 0.078 Kg

Q.6: Question on book.

Sol: Pradeep ran a race in = 80.14 secs

10

Lalit ran the race in $= -79.99$ secs
 $\therefore$ Difference in their timing $= -0.15$ secs.

Q.7: Question on book.

Sol: Weight of Tom $= 62.08$ Kg

Weight of Tim $= -41.80$ Kg

$\therefore$ Difference in their Weight $= 20.28$ Kg.

Exercise $\Rightarrow$ 50

1. Fill in the boxes.

(a) $3.52 \times 100 = 352$

(b) $0.123 \times \underline{1000} = 123$

(c) $0.081 \times \underline{1000} = 81$

(d) $80.9 \times \underline{10} = 809$

2. Multiply the decimals.

(a)
$$\begin{array}{r} 4.2 \times 7 \\ \hline 29.4 \end{array}$$

(d)
$$\begin{array}{r} 1.8 \times 72 \\ 36 \\ \hline 126 \times \\ \hline 129.6 \end{array}$$

(g)
$$\begin{array}{r} 16.31 \times 9 \\ \hline 146.79 \end{array}$$

(j)
$$\begin{array}{r} 8.6 \times 0.8 \\ \hline 6.88 \end{array}$$

(m)
$$\begin{array}{r} 1.4 \times 41.09 \\ 126 \\ 00 \times \\ 14 \times \times \\ 56 \times \times \times \\ \hline 57.526 \end{array}$$

(p)
$$\begin{array}{r} 0.8 \times 6.12 \\ 16 \\ 8 \times \\ 48 \times \times \\ \hline 4.896 \end{array}$$

3. Multiply the decimals.

(a)
$$\begin{array}{r} 0.3 \times 0.1 \\ \hline 0.03 \end{array}$$

(c)
$$\begin{array}{r} 0.5 \times 0.2 \\ \hline 0.10 \end{array}$$

(e)
$$\begin{array}{r} 0.07 \times 0.2 \\ \hline 0.014 \end{array}$$

(g)
$$\begin{array}{r} 0.6 \times 0.0 \\ \hline 0 \end{array}$$

4. Fill in the boxes.

(a) $2.4 \times \boxed{10} = 24$

(b) $4.28 \times \boxed{100} = 428$

$$(c) 24.13 \times \boxed{10} = 241.3$$

$$(d) 0.085 \times \boxed{100} = 8.5$$

$$(e) 97.328 \times \boxed{100} = 9732.8$$

$$(f) 3.482 \times \boxed{1000} = 3482$$

5. On book.

6. Word problems.

(a) Question on book.

Sol: One bottle contains = 2.55 L Water

Total no. of bottles given = 9

$$\therefore \text{Water contained in 9 bottles} = \frac{2.55 \times 9}{22.95 \text{ L}}$$

(b) Question on book.

Sol: Milk bought by Mohit = 4.52 L

Cost of 1 litre Milk = ₹ 12.50.

$\therefore$ Total amount paid by Mohit for 4.52 L

$$= \frac{4.52 \times 12.50}{000}$$

$$2260 \times$$

$$904 \times \times$$

$$\frac{452 \times \times \times}{56.5000} = ₹ 56.5$$

$$56.5000 = ₹ 56.5$$

(c) Question on book.

Sol: Total cloth bought by Mona = 12.75 m.

Cost of cloth per metre = ₹ 100

$\therefore$ Total amount paid by Mona for

$$12.75 \text{ m} = 12.75 \times 100$$

$$\begin{array}{r}
 12.75 \times 100 \\
 0000 \\
 0000 \times \\
 1275 \times \times \\
 \hline
 1275.00
 \end{array} = ₹ 1275$$

(d) Question on book.

Sol: Weight of one container = 212.4 Kg

Total no. of containers = 1000.

∴ Weight of 1000 containers = $\frac{212.4 \times 1000}{}$

$$\begin{array}{r}
 0000 \\
 0000 \times \\
 0000 \times \times \\
 2124 \times \times \times \\
 \hline
 212400.0
 \end{array}$$

$$= 212400 \text{ Kg}$$

(e) Question on book.

Sol: Total no. of pens bought by Kishor = 12

Cost of 1 pen = ₹ 38.5.

∴ cost of 12 pens = $\frac{38.5 \times 12}{}$

$$\begin{array}{r}
 770 \\
 385 \times \\
 \hline
 462.0
 \end{array}$$

$$= ₹ 462.$$

(f) Question on book.

Sol: Total Petrol Purchased by Mayank's father

$$= 12.5 \text{ litres.}$$

Cost of Petrol per litre = ₹ 48.47.

∴ Total amount paid by Mayank's father =

$$\begin{array}{r} 48.47 \times 12.5 \\ \hline 24235 \\ 9694 \times \\ \hline 4847 \times \times \\ \hline 605.875 \end{array} = ₹ 605.875$$

Exercise :-> 51

1. Divide and find the quotient. Verify your answer by multiplication

(a) $7.65 \div 3$

Sol:
$$\begin{array}{r} 2.55 \\ 3 \overline{) 7.65} \\ \underline{6} \\ 16 \\ \underline{15} \\ 15 \\ \underline{15} \\ 0 \end{array}$$

Verify :->

$$\begin{array}{r} 2.55 \times 3 \\ \hline 7.65 \end{array}$$

(d) $33.7 \div 6$

Sol:
$$\begin{array}{r} 56.2 \\ 6 \overline{) 337.2} \\ \underline{30} \\ 37 \end{array}$$

$$\begin{array}{r} 36 \\ 12 \\ \underline{12} \\ \times \end{array}$$

Verify $\rightarrow$

$$\begin{array}{r} 56.2 \times 6 \\ \hline 337.2 \end{array}$$

(g) $9.18 \div 9$

Sol:

$$\begin{array}{r} 1.02 \\ 9 \overline{) 9.18} \\ \underline{9} \\ 18 \\ \underline{18} \\ \times \end{array}$$

Verify $\rightarrow$

$$\begin{array}{r} 1.02 \times 9 \\ \hline 9.18 \end{array}$$

(j) $3.50 \div 2$

Sol:

$$\begin{array}{r} 1.75 \\ 2 \overline{) 3.50} \\ \underline{2} \\ 15 \\ \underline{14} \\ 10 \\ \underline{10} \\ \times \end{array}$$

Verify $\rightarrow$

$$\begin{array}{r} 1.75 \times 2 \\ \hline 3.50 \end{array}$$

(m) $22.09 \div 2$

sol:
$$\begin{array}{r} 11.045 \\ 2 \overline{) 22.09} \\ \underline{2} \\ 2 \\ \underline{2} \\ 9 \\ \underline{8} \\ 10 \\ \underline{10} \\ \times \end{array}$$

Verify $\rightarrow$

$$\frac{11.045 \times 2}{22.090} = 22.09.$$

2. Word problems:

(a) Question on book.

sol: Total no. of balls = 4.

Weight of 4 balls = 2.24 Kg.

$\therefore$ Weight of each ball = $2.24 \div 4$

$$\begin{array}{r} 0.56 \\ 4 \overline{) 2.24} \\ \underline{20} \\ 24 \\ \underline{24} \\ \times \end{array}$$

= 0.56 Kg.

(b) Question on book.

Sol: Total no. of card sheets = 6

Thickness of 6 card sheets = 2.454 mm

$\therefore$ Thickness of each card sheet = $2.454 \div 6$

$$\begin{array}{r} 0.409 \\ 6 \overline{) 2.454} \\ \underline{24} \\ 54 \\ \underline{54} \\ \times \end{array}$$

= 0.409 mm.

(c) Question on book.

Sol: Total length of cloth = 4.7 m.

$$= \frac{4.7 \times 10}{47.0}$$

Cost of 4.7 m cloth = ₹ 320.54.

$$\begin{aligned} \text{Cost of 1 m cloth} &= \frac{320.54 \times 10}{47} \\ &= 3205.4 \end{aligned}$$

$\therefore$ cost of 1 m cloth = ₹ 3205.4 $\div$ 47

$$\begin{array}{r} 68.2 \\ 47 \overline{) 3205.4} \\ \underline{282} \\ 385 \\ \underline{376} \\ 94 \\ \underline{94} \\ \times \end{array}$$

= ₹ 68.20.

(d) Question on book.

Sol: Distance covered by Mom's father = 564.12 Km.

Time taken by Momu's father = 9 hours.

$\therefore$ Distance covered by Momu's father in one hour = $564.12 \div 9$

$$\begin{array}{r}
 62.68 \\
 9 \overline{) 564.12} \\
 \underline{54} \\
 24 \\
 \underline{18} \\
 61 \\
 \underline{54} \\
 72 \\
 \underline{72} \\
 0
 \end{array}$$

$\times$
= 62.68 Km.

(e) Question on book.

Sol: Total length of the pipe = 3.76 m.

No. of pieces to be cut = 8.

$\therefore$ length of each piece = $3.76 \div 8$

$$\begin{array}{r}
 0.48 \\
 8 \overline{) 3.76} \\
 \underline{32} \\
 56 \\
 \underline{56} \\
 0
 \end{array}$$

$\times$
= 0.48 m.

(f) Question on book.

Sol: Total no. of bangles = 9

Weight of 9 bangles = 121.5 g

$\therefore$ Weight of each bangle = $121.5 \div 9$

$$\begin{array}{r}
 13.5 \\
 9 \overline{) 121.5} \\
 \underline{9} \\
 31 \\
 \underline{27} \\
 45 \\
 \underline{45} \\
 \times
 \end{array}$$

$$= 13.5 \text{ g}$$

Exercise $\rightarrow$ 52

1. Write the missing numbers in the boxes.

(a) $3 \div 10 = \underline{0.3}$

(b) $8.0 \div 10 = \underline{0.8}$

(c) $1.23 \div 10 = \underline{0.123}$

(d) $7.86 \div 100 = \underline{0.0786}$

(e) $132 \div \underline{100} = 1.32$

(f) $8.21 \div \underline{1} = 8.21$

(g) $\underline{3261} \div 1000 = 3.261$

(h) $\underline{164.3} \div 10 = 16.43$

(i) $\underline{11} \div 100 = 0.11$

(j) $786 \div \underline{1000} = 0.786$

(k) $786 \div \underline{10000} = 0.0786$

(l) $\underline{1} \div 100 = 0.01$

2. On book.

Exercise $\rightarrow$ 53

1. Divide $\rightarrow$

(a) $0.008 \div 0.4$

$\frac{0.4 \times 10}{= 4}$ [convert divisor into whole no.]

$\frac{0.008 \times 10}{= 0.08}$ [Also multiply dividend by 10 to keep the value of divisor and dividend same].

$= 0.08 \div 4$

$$\begin{array}{r} 0.02 \\ 4 \overline{) 0.08} \\ \underline{8} \\ \times \end{array}$$

$= 0.02$

(c) $6.5 \div 0.5$

$\frac{0.5 \times 10}{= 5}$

$\frac{6.5 \times 10}{= 65}$

$= 65 \div 5$

$$\begin{array}{r} 13 \\ 5 \overline{) 65} \\ \underline{65} \\ \times \end{array}$$

$= 13.$

(e) $2.268 \div 3.6$

sol: $\frac{3.6 \times 10}{= 36}$

$\frac{2.268 \times 10}{= 22.68}$

$= 22.68 \div 36$

$$\begin{array}{r} 0.63 \\ 36 \overline{) 22.68} \\ \underline{216} \\ 108 \\ \underline{108} \\ 0 \\ \times \end{array}$$

$= 0.63$

(g) $32.16 \div 0.008$

sol: $\frac{0.008 \times 1000}{= 8}$

$\frac{32.16 \times 1000}{= 32160}$

$= 32160 \div 8$

$$\begin{array}{r} 4020 \\ 8 \overline{) 32160} \\ \underline{32} \\ 16 \\ \underline{16} \\ 0 \\ \times \end{array}$$

$= 4020$

16) $28.36 \div 0.8$

Sol: $\frac{0.8 \times 10}{= 8}$

$\frac{28.36 \times 10}{= 283.6}$

$= 283.6 \div 8$

$$\begin{array}{r} 35.45 \\ 8 \overline{) 283.6} \\ \underline{24} \\ 43 \\ \underline{40} \\ 36 \\ \underline{32} \\ 40 \\ \underline{40} \\ \times \\ = 35.45. \end{array}$$

2. Express each fraction as a decimal.

(a) $\frac{1}{4}$

Sol: $1 \div 4$

$$\begin{array}{r} 0.25 \\ 4 \overline{) 10} \\ \underline{8} \\ 20 \\ \underline{20} \\ \times \\ = 0.25 \end{array}$$

$= 0.25$

$$(c) \frac{5}{8}$$

$$\text{sol: } 5 \div 8$$

$$\begin{array}{r} 0.625 \\ 8 \overline{) 50} \\ \underline{48} \\ 20 \\ \underline{16} \\ 40 \\ \underline{40} \\ \times \end{array}$$

$$= 0.625$$

$$(e) \frac{3}{16}$$

$$\text{sol: } 3 \div 16$$

$$\begin{array}{r} 0.1875 \\ 16 \overline{) 30} \\ \underline{16} \\ 140 \\ \underline{128} \\ 120 \\ \underline{112} \\ 80 \\ \underline{80} \\ \times \end{array}$$

$$= 0.1875$$

Exercise: → 54
REVISION

1. Convert into like decimals.

$$(a) \quad 7.4 = 7.40$$

$$16.14 = 16.14$$

$$(b) \quad 3.21 = 3.21$$

$$45.1 = 45.10$$

2. Compare using $>$, $=$, $<$.

$$(a) \quad 3.08 < 30.8$$

$$(c) \quad 0.09 < 0.9$$

$$(e) \quad 3.01 > 3.001$$

3. Write in ascending order.

$$(a) \quad 12.08 \quad 121.8 \quad 12.08 \quad 12.06$$

$$\text{Sol: } 12.06 < 12.08 < 12.08 < 121.8$$

$$(c) \quad 36.18 \quad 14.3 \quad 25.23 \quad 18.24$$

$$\text{Sol: } 14.3 < 18.24 < 25.23 < 36.18$$

4. Write in descending order.

$$(a) \quad 7.1 \quad 7.202 \quad 7.02 \quad 7.22$$

$$\text{Sol: } 7.22 > 7.202 > 7.1 > 7.02$$

$$(c) \quad 54.01 \quad 51.5 \quad 55.03 \quad 50.25$$

$$\text{Sol: } 55.03 > 54.01 > 51.5 > 50.25$$

5. Add and Write.

$$(a) \quad 20 + 6 + \underline{2}$$

100

$$\text{Sol: } 20 + 6 + 0.02$$

$$= 26.02$$

(c) $0.6 + 0.07 + 0.002$

Sol: 0.672

(e) $3.2 + 4.6 + 5.2$

Sol: 3.2

$$4.6$$

$$+ 5.2$$

$$\hline 13.0$$

6. Fill in the boxes.

(a) 24×1.3

Sol: 24×1.3

$$72$$

$$24 \times$$

$$\hline 31.2$$

(d) 5.25×0.25

Sol: 5.25×0.25

$$2625$$

$$1050 \times$$

$$\hline 000 \times \times$$

$$1.3125$$

(g) 1.9×38

Sol: 1.9×38

$$152$$

$$57 \times$$

$$\hline 72.2$$

7. Find the value

(a) $5.94 \div 1.8$

Sol: $\frac{1.8 \times 10}{18}$

$\frac{5.94 \times 10}{59.4}$

$= 59.4 \div 18$

$$\begin{array}{r} 3.3 \\ 18 \overline{) 59.4} \\ \underline{54} \\ 54 \\ \underline{54} \\ \times \end{array}$$

$= 3.3$

(g) $16.804 \div 100$

Sol: $\frac{0.16804}{100 \overline{) 16.804}}$

$$\begin{array}{r} 100 \\ \underline{100} \\ 680 \\ \underline{600} \\ 804 \\ \underline{800} \\ 400 \\ \underline{400} \\ \times \end{array}$$

$= 0.16804$

8. Fill in the boxes.

- (a) $809 \times \underline{0.1} = 80.9$
 (b) $702 \times 0.1 = \underline{70.2}$
 (c) $809 \times \underline{0.01} = 8.09$
 (d) $702 \times 0.01 = \underline{7.02}$
 (e) $809 \times \underline{0.001} = 0.809$
 (f) $702 \times 0.001 = \underline{0.702}$

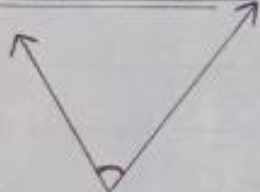
MATH B [GEOMETRY]

KINDS OF ANGLES

- 1: Right angle $\rightarrow$ An angle of 90° is called a Right angle. A right angle is represented by a small square $\square$.
- 2: Acute angle $\rightarrow$ Any angle that is less than 90° is known as an acute angle.
- 3: Obtuse angle $\rightarrow$ Any angle between 90° and 180° is called an obtuse angle.
- 4: Straight angle $\rightarrow$ An angle formed by a straight line is called a straight angle. This angle is equal to the sum of 2 right angles, that is 180° . ($2 \times 90^\circ = 180^\circ$)

Exercise $\rightarrow$ 59

(a)



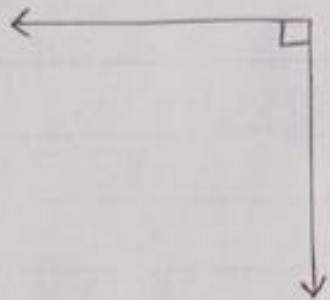
Acute angle

(b)

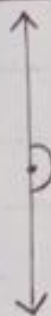


Obtuse Angle

(c)

Right angle

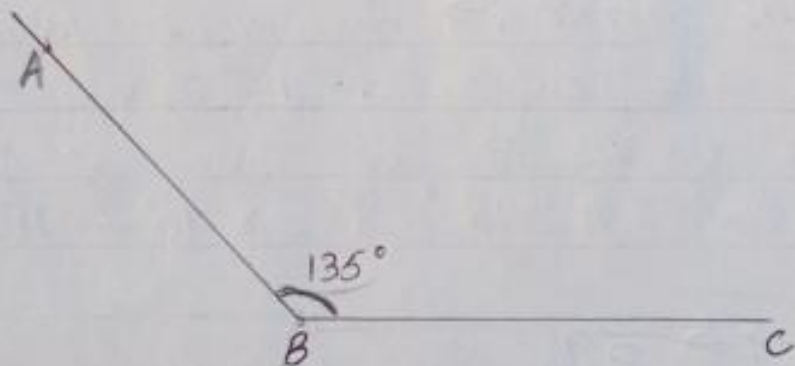
(d)

Straight angle

2. State True (T) or False (F).

(a) 5° angle is an acute angle. T(b) Two 90° angles together form an obtuse angle. F(c) An obtuse angle is always less than 180° . T(d) A right angle is always more than 90° . FExercise :→ 61

1. Use your protractor to draw the following angles.

(a) $\angle 135^\circ = \angle ABC$ (i) Draw a line segment $\overline{BC}$

(ii) Place the protractor with its centre point on B and the base line on BC.

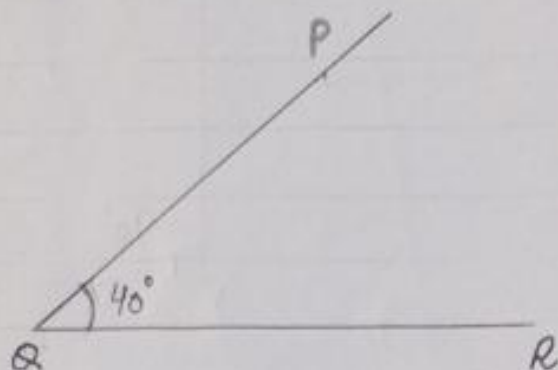
(iii) On the inner scale, locate 135° and mark

it as point A.

(iv) Connect B to A to form $\overline{AB}$.

(v) $\angle ABC = 135^\circ$.

(b) $\angle PQR = 40^\circ$



(i) Draw a line segment $\overline{QR}$.

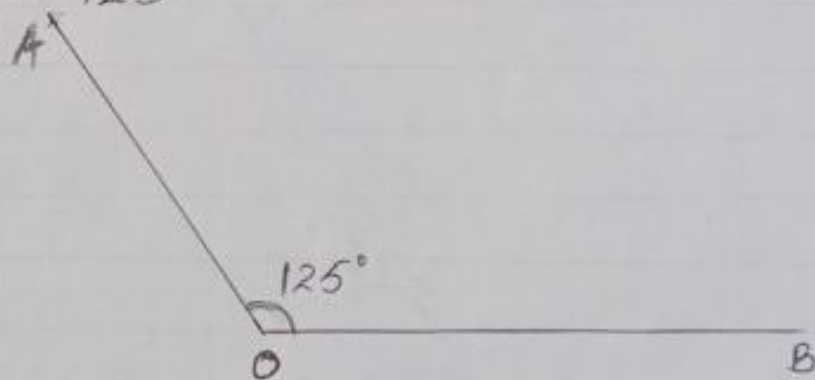
(ii) Place the protractor with its centre point on Q and the base line on $\overline{QR}$.

(iii) On the inner scale, locate 40° and mark it as point P.

(iv) Connect Q to P to form $\overline{QP}$.

(v) $\angle PQR = 40^\circ$.

(c) $\angle AOB = 125^\circ$



(i) Draw a line segment $\overline{OB}$.

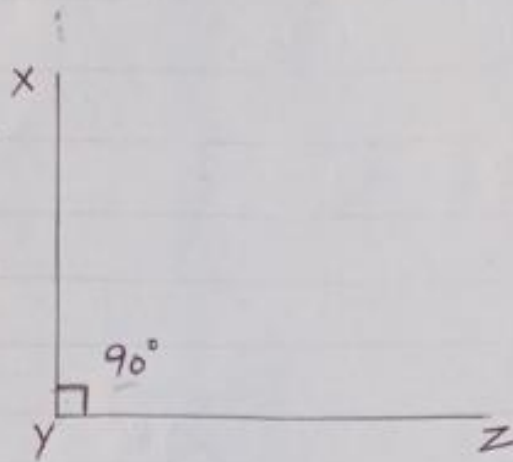
(ii) Place the protractor with its centre point on O and the base line on $\overline{OB}$.

(iii) On the inner scale, locate 125° and mark it as point A.

(iv) Connect O to A to form $\overline{OA}$.

(w) $\angle AOB = 125^\circ$.

(d) $\angle XYZ = 90^\circ$



(i) Draw a line segment $\overline{YZ}$.

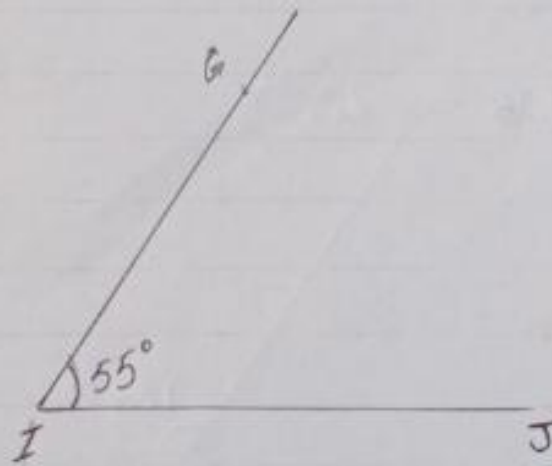
(ii) Place the protractor with its centre point on Y and the base line on $\overline{YZ}$.

(iii) On the inner scale, locate 90° and mark it as point X.

(iv) Connect Y to X to form $\overline{YX}$.

(v) $\angle XYZ = 90^\circ$.

(e) $\angle I = 55^\circ$



(i) Draw a line segment $\overline{IJ}$.

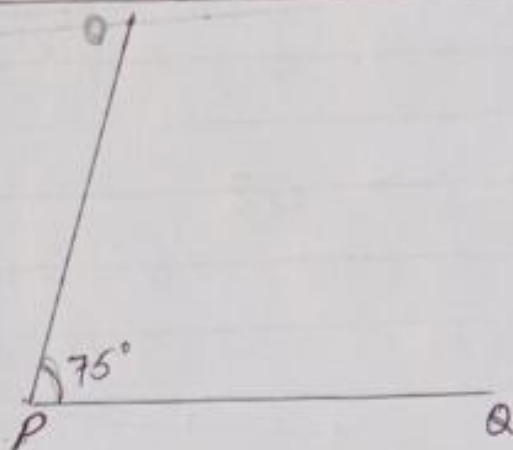
(ii) Place the protractor with its centre point on I and base line on $\overline{IJ}$.

(iii) On the inner scale, locate 55° and mark it as point H.

(iv) Connect I to H to form $\overline{IH}$.

(v) $\angle I = 55^\circ$.

(f) $\angle P = 75^\circ$



- (i) Draw a line segment $\overline{PQ}$.
- (ii) Place the protractor with its centre point on P and the base line on $\overline{PQ}$.
- (iii) On the inner scale, locate 75° and mark it as point O.
- (iv) Connect P to O to form $\overline{PO}$.
- (v) $\angle OPQ = 75^\circ$

DEFINITIONS:->

TYPES OF LINES.

(a) **Parallel lines** :-> The lines which never meet each other and maintain the same distance between them throughout are called the parallel lines.

Parallel lines are represented by the symbol. $\parallel$.

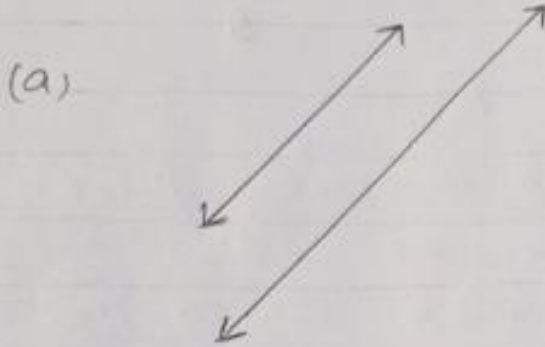
(b) **Intersecting lines** :-> When two lines cut each other at a point, they are called intersecting lines.

(c) **Perpendicular lines** :-> Two intersecting lines forming right angles at the point of intersection are called the perpendicular lines.

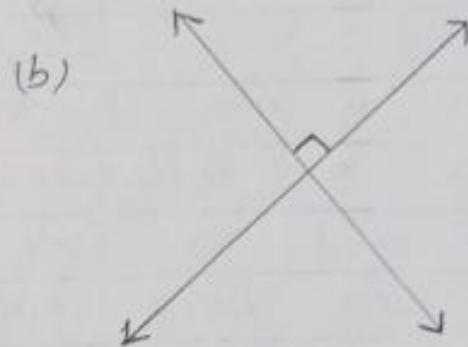
The symbol of perpendicular is $\perp$.

Exercise :-> 62.

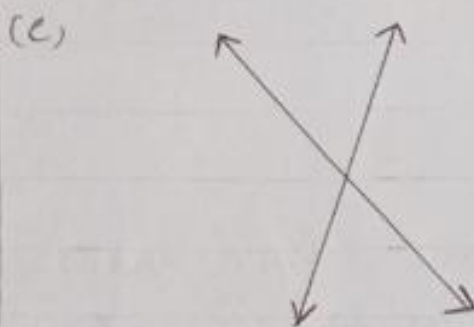
Write whether the lines shown below are parallel, intersecting or perpendicular lines.



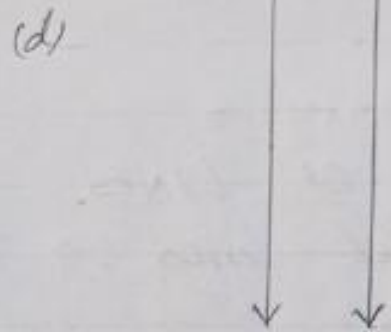
Parallel lines



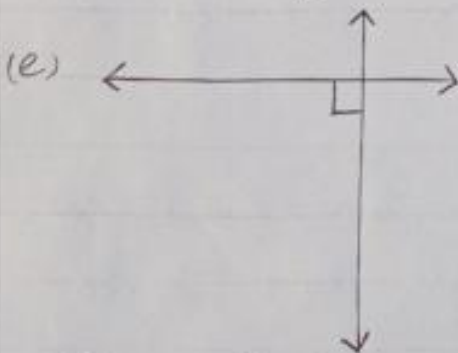
Perpendicular lines



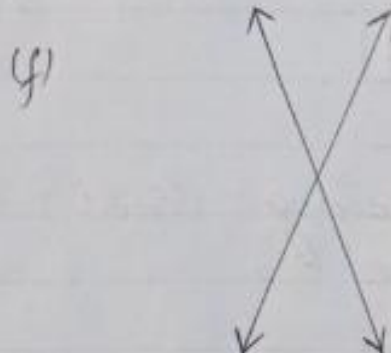
Intersecting lines



Parallel lines



Perpendicular lines



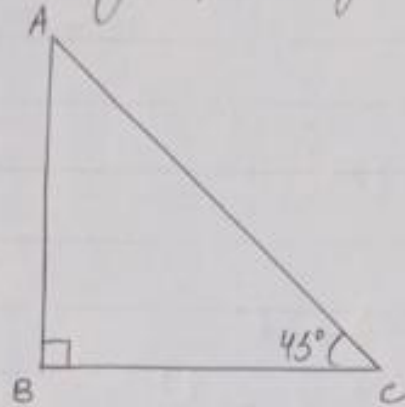
Intersecting lines

Exercise :-> 63

1. Find the measure of the third angle.

[Practice remaining parts yourself].

(a)



Sol: In $\triangle ABC$:

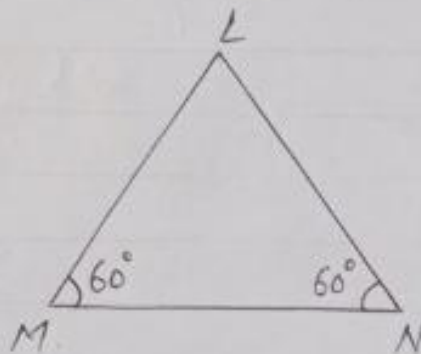
$$\angle B + \angle C = 90^\circ + 45^\circ \\ = 135^\circ$$

Since, $\angle A + \angle B + \angle C = 180^\circ$

$$\text{So, } \angle A = 180^\circ - 135^\circ = 45^\circ$$

Thus, $\angle A = 45^\circ$.

(c)



Sol: In $\triangle LMN$,

$$\angle M + \angle N = 60^\circ + 60^\circ \\ = 120^\circ$$

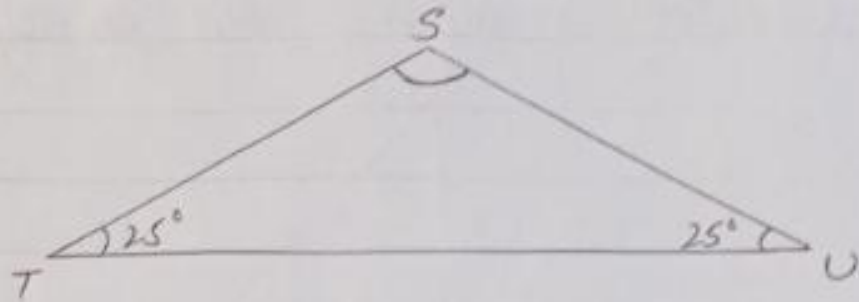
Since, $\angle L + \angle M + \angle N = 180^\circ$

$$\text{So, } \angle L = 180^\circ - 120^\circ$$

$$\angle L = 60^\circ$$

Thus, $\angle L = 60^\circ$.

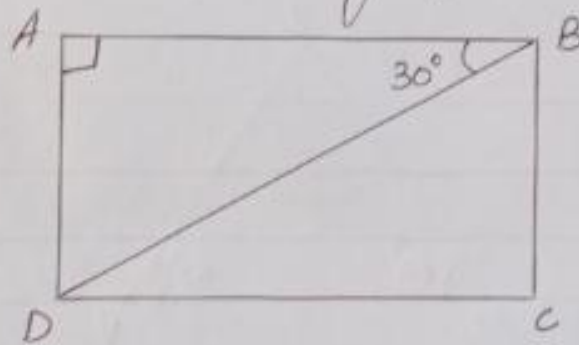
(e)



sol: In $\triangle STU$,
 $\angle T + \angle U = 25^\circ + 25^\circ$
 $= 50^\circ$
 Since, $\angle S + \angle T + \angle U = 180^\circ$
 So, $\angle S = 180^\circ - 50^\circ = 130^\circ$
 Thus, $\angle S = 130^\circ$

2. Find the angles mentioned below.
 [Practice remaining parts yourself].

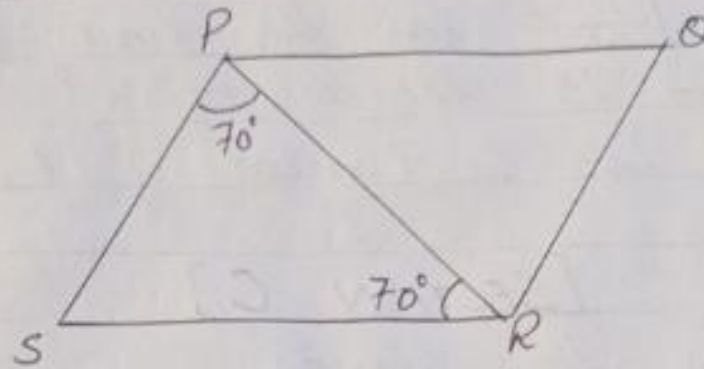
(a)



$$\angle ADB = \underline{60^\circ}$$

sol: In $\triangle ADB$,
 $\angle A + \angle B =$
 $= 90^\circ + 30^\circ$
 $= 120^\circ$
 Since, $\angle A + \angle B + \angle D = 180^\circ$
 So, $\angle D = 180^\circ - 120^\circ$
 $= 60^\circ$
 Thus, $\angle D = 60^\circ$

(d)



$$\angle PSR = \underline{40^\circ}$$

Sol: In $\triangle PSR$,
 $\angle P + \angle R = 70^\circ + 70^\circ$
 $= 140^\circ$

Since, $\angle P + \angle S + \angle R = 180^\circ$

$$\text{So, } \angle S = 180^\circ - 140^\circ$$

$$= 40^\circ$$

Thus, $\angle S = 40^\circ$

Term 2nd Completed
