Percentage

Activity

Solution 1:

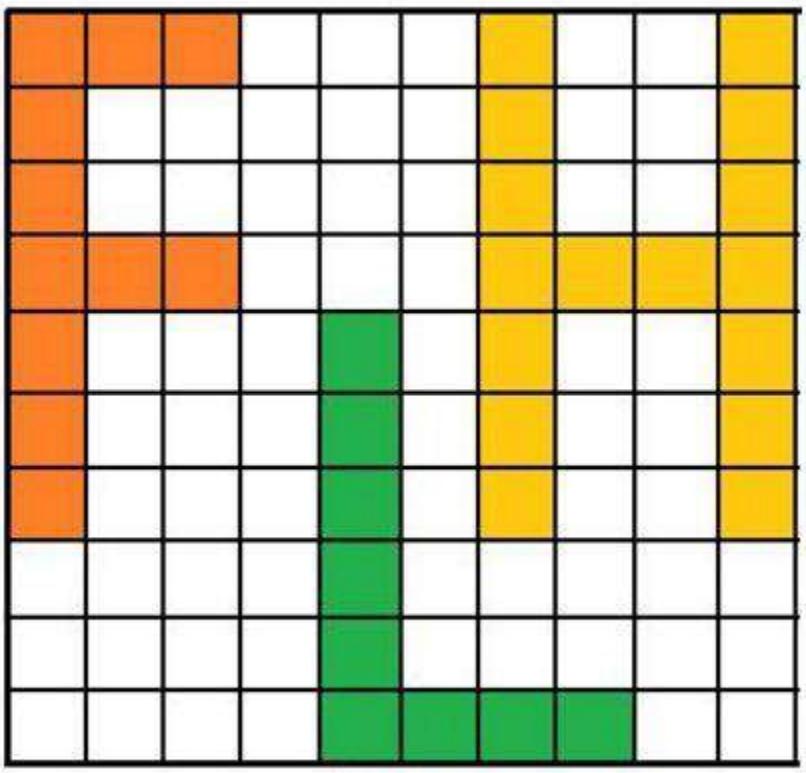

Figure 3

Alphabet	Occupied boxes	Fraction form	Percentage
E	13	$\frac{13}{100}$	13%
S	16	$\frac{16}{100}$	16%
F	11	$\frac{11}{100}$	11%
L	9	$\frac{9}{100}$	9%
H	16	$\frac{16}{100}$	16%

Table 2

Symbol	Fraction	Percentage	Reduced form	Conversion of reduced form into percentage
	$\frac{40}{100}$	40 %	$\frac{2\times2\times2\times5}{2\times2\times5\times5}=\frac{2}{5}$	$\frac{2}{5}\times\boxed{100}=40\%$
	$\frac{25}{100}$	25 %	$\frac{5\times5}{2\times2\times5\times5}=\frac{1}{4}$	$\frac{1}{4}\times\boxed{100}=25\%$
	$\frac{20}{100}$	20 %	$\frac{2\times2\times5}{2\times2\times5\times5}=\frac{1}{5}$	$\frac{1}{5}\times\boxed{100}=20\%$
	$\frac{15}{100}$	15 %	$\frac{3\times5}{2\times2\times5\times5}=\frac{3}{20}$	$\frac{3}{20}\times\boxed{100}=15\%$
E	$\frac{13}{100}$	13 %	$\frac{13}{2\times2\times5\times5}=\frac{13}{100}$	$\frac{13}{100}\times\boxed{100}=13\%$
S	$\frac{16}{100}$	16 %	$\frac{2\times2\times2\times2}{2\times2\times5\times5}=\frac{4}{25}$	$\frac{4}{25}\times\boxed{100}=16\%$
L	$\frac{9}{100}$	9 %	$\frac{3\times3}{2\times2\times5\times5}=\frac{9}{100}$	$\frac{9}{100}\times\boxed{100}=9\%$
H	$\frac{16}{100}$	16 %	$\frac{2\times2\times2\times2}{2\times2\times5\times5}=\frac{4}{25}$	$\frac{4}{25}\times\boxed{100}=16\%$
F	$\frac{11}{100}$	11 %	$\frac{11}{2\times2\times5\times5}=\frac{11}{100}$	$\frac{11}{100}\times\boxed{100}=11\%$

Table 3

Exercise

Solution 1:

(1)910 out of 2600 can be expressed in fraction form as $\frac{910}{2600}$.

Pecentage=Fraction Form$\times$100

Pecentage $=\frac{910}{2600}\times100=35\%$

(2) $0.76=\frac{76}{100}$

Pecentage = Fraction Form$\times$100

Pecentage$=\frac{76}{100}\times100=76\%$

(3) $0.601=\frac{601}{1000}$

Pecentage=Fraction Form$\times$100

Pecentage $=\frac{601}{1000}\times100=60.1\%$

(4) $\frac{7}{8}$

Pecentage=Fraction Form x 100

Pecentage=$\frac{7}{8}$ x 100=$\frac{7}{2}$ x25=87.5%

(5) $\frac{29}{40}$

Pecentage=Fraction Form x 100

Pecentage=$\frac{29}{2}$ x 100=$\frac{29}{40}$ x5=72.5%

Solution 2:

(1) 16% = $\frac{16}{100}$

16% of 250 = $\frac{16}{100}$ ×250 = 8 × 5 = 40

∴ 16% of 250 is 40.

(2) 17.5% = $\frac{17.5}{100}$

17.5% of 1600 = $\frac{17.5}{100}$ x1600 = 17.5 × 1600=280

∴ 17.5% of 1600 is 280.

(3) 15% = $\frac{15}{100}$

15% of 2000 = $\frac{15}{100}$ ×2000 = 15 × 20 = 300

∴ 15% of 2000 is 300.

(4) 20% = $\frac{20}{100}$

20% of 5000 = $\frac{20}{100}$ ×5000=1000

∴ 20% of 5000 is 1000.

(5) $25\% = \frac{25}{100}$

25% of $6000 = \frac{25}{100} \times 6000 = 1500$

$\therefore$ 25% of 6000 is 1500.

(6) $12.5\% = \frac{12.5}{100}$

12.5% of $8000 = \frac{12.5}{100} \times 8000 = 12.5 \times 80 = 1000$

$\therefore$ 12.5% of 8000 is 1000.

Solution 3:

Area of the whole field = 7200 sq.m

Area in which groundnut is grown = 4500 sq.m

4500 sq.m out of 7200 sq.m can be expressed in fraction form as $\frac{4500}{7200}$.

Percentage = Fraction form $\times$ 100

$\therefore$ Percentage of the field used for groundnut $= \frac{4500}{7200} \times 100 = \frac{125}{2} = 62.5\%$

Therefore, groundnut is sowed in 62.5% of the whole field.

Solution 4:

Population of the village = 9000

Numbers of voters in the village = 6300

6300 out of 9000 can be expressed in fraction form as $\frac{6300}{9000}$.

Percentage = Fraction form $\times$ 100

$\therefore$ Percentage of voters in the village $= \frac{6300}{9000} \times 100 = 70\%$

Therefore, 70% of the Population of the village consists of voters.

Solution 5:

$$75\% = \frac{75}{100}$$

$$\text{No. of houses sold} = 75\% \text{ of } 460 = \frac{75}{100} \times 460 = 3 \times 115 = 345$$

Therefore, 345 houses were sold.

Solution 6:

Total fund collected = ₹6000

Fund collected by school children = 42.5%

$$\Rightarrow 42.5\% = \frac{42.5}{100}$$

$$\text{Fund collected by school children} = 42.5\% \text{ of } ₹6000 = \frac{42.5}{100} \times 6000 = 42.5 \times 60 = ₹2550$$

Therefore, the school children collected ₹2550 for the fund.

Solution 7:

Number of animals in 2001 = 12,000

$$25.5\% = \frac{25.5}{100}$$

Rise in the number of animals in 2011 = 25.5% of 12,000

Increase in the number of animals = 25.5% of 12000

$$\therefore \text{Increase in the number of animals} = \frac{25.5}{100} \times 12000 = 25.5 \times 120 = 3060$$

Therefore, the number of animals had increased by 3060.

Practice – 1

Solution 1:

(1)240 out of 600 can be expressed in fraction form as $\frac{240}{600}$.

$\therefore$ Percentage $=$ Fraction $\times 100 = \left(\frac{240}{600} \times 100\right) = 40\%$

$\therefore$ 240 out of 600 is 40%.

(2)900 out of 1200 can be expressed in fraction form as $\frac{900}{1200}$.

$\therefore$ Percentage $=$ Fraction $\times 100 = \left(\frac{900}{1200} \times 100\right)\% = 75\%$

$\therefore$ 900 out of 1200 is 75%.

(3)42 out of 70 can be expressed in fraction form as $\frac{42}{70}$.

$\therefore$ Percentage $=$ Fraction $\times 100 = \left(\frac{42}{70} \times 100\right)\% = 60\%$

$\therefore$ 42 out of 70 is 60%.

(4)285 out of 300 can be expressed in fraction form as $\frac{285}{300}$.

$\therefore$ Percentage $=$ Fraction $\times 100 = \frac{285}{300} = \left(\frac{285}{300} \times 100\right)\% = 95\%$

$\therefore$ 285 out of 300 is 95%.

Solution 2:

Disha got 35 out of 50 can be expressed in fraction form as $\frac{35}{50}$.

Percentage $=$ Fraction $\times 100 = \left(\frac{35}{50} \times 100\right) = 70\%$

Thus, Disha got 70% marks.

Solution 3:

Total amount with Bindu = 500

Amount spent for jacket = 450

450 out of 500 can be expressed in fraction form as $\frac{450}{500}$.

$$\text{Percentage} = \text{Fraction} \times 100 = \left(\frac{450}{500} \times 100\right) = 90\%$$

Thus, Bindu spent 90% of the money.

Solution 4:

The quantity of rice Ishwarbhai had = 800 kg

The quantity of rice sold by Ishwarbhai = 520 kg

520 kg of rice sold out of the total quantity of 800 kg of rice can be expressed in fraction form as $\frac{520}{800}$.

$$\text{Percentage} = \text{Fraction} \times 100 = \left(\frac{520}{800} \times 100\right) = 65\%$$

Thus, Ishwarbhai sold 65% of the rice.

Solution 5:

The total number of sportsmen = 1500

Number of sportsmen who took part in the sports competition = 630

630 out of 1500 can be expressed in fraction form as $\frac{630}{1500}$.

$$\text{Percentage} = \text{Fraction} \times 100 = \frac{630}{1500} = \left(\frac{630}{1500} \times 100\right) = 42\%$$

Thus, 42% of the sportsmen took part in the race.

Solution 6:

Total cloth with the merchant = 1700 m
Cloth sold by the merchant = 1700 m

$$\text{Percentage} = \text{Fraction} \times 100 = \left(\frac{1700}{1700} \times 100\right) = 100\%$$

Thus, 100% of cloth was sold by the merchant.

Practice – 2

Solution 1:

To convert fraction into percentage, multiply by 100.

$$\therefore \frac{1}{4} = \left(\frac{1}{4} \times 100\right)\% = 25\%$$

Solution 2:

To convert fraction into percentage, multiply by 100.

$$\therefore \frac{12}{40} = \left(\frac{12}{40} \times 100\right)\% = 30\%$$

Solution 3:

To convert fraction into percentage, multiply by 100.

$$\therefore \frac{4}{10} = \left(\frac{4}{10} \times 100\right)\% = 40\%$$

Solution 4:

To convert fraction into percentage, multiply by 100.

$$\therefore \frac{4}{5} = \left(\frac{4}{5} \times 100\right)\% = 80\%$$

Solution 5:

To convert fraction into percentage, multiply by 100.

$$\therefore \frac{7}{14} = \left(\frac{7}{14} \times 100\right)\% = 50\%$$

Solution 6:

To convert fraction into percentage, multiply by 100.

$$\therefore \frac{15}{50} = \left(\frac{15}{50} \times 100\right)\% = 30\%$$

Solution 7:

To convert fraction into percentage, multiply by 100.

$$\therefore \frac{18}{90} = \left(\frac{18}{90} \times 100\right)\% = 20\%$$

Solution 8:

To convert fraction into percentage, multiply by 100.

$$\therefore \frac{70}{100} = \left(\frac{70}{100} \times 100\right)\% = 70\%$$

Solution 9:

To convert fraction into percentage, multiply by 100.

$$\therefore \frac{35}{140} = \left(\frac{35}{140} \times 100\right)\% = 25\%$$

Solution 10:

To convert fraction into percentage, multiply by 100.

$$\therefore \frac{45}{60} = \left(\frac{45}{60} \times 100\right)\% = 75\%$$

Practice – 3

Solution 1:

To convert decimal into percent, multiply by 100 and put the % sign.

$$\therefore \text{ Percentage of } 0.25 = \frac{25}{100} \times 100 = 25\ \%$$

Solution 2:

To convert decimal into percent, multiply by 100 and put the % sign.

$$\therefore \text{ Percentage of } 0.25 = \frac{238}{1000} \times 100 = 23.8\ \%$$

Solution 3:

To convert decimal into percent, multiply by 100 and put the % sign.

$$\therefore \text{Percentage of } 0.3 = \frac{3}{10} \times 100 = 30\%$$

Solution 4:

To convert decimal into percent, multiply by 100 and put the % sign.

$$\therefore \text{ Percentage of } 0.1272 = \frac{1272}{10000} \times 100 = 12.72\%$$

Solution 5:

To convert decimal into percent, multiply by 100 and put the % sign.

$$\therefore \text{Percentage of } 0.376 = \frac{376}{1000} \times 100 = 37.6\,\%$$

Solution 6:

To convert decimal into percent, multiply by 100 and put the % sign.

$$\therefore \text{Percentage of } 0.475 = \frac{475}{1000} \times 100 = 4.75\,\%$$

Solution 7:

To convert decimal into percent, multiply by 100 and put the % sign.

$$\therefore \text{Percentage of } 0.819 = \frac{819}{1000} \times 100 = 8.19\,\%$$

Solution 8:

To convert decimal into percent, multiply by 100 and put the % sign.

$$\therefore \text{Percentage of } 0.4576 = \frac{4576}{10000} \times 100 = 45.76\,\%$$

Solution 9:

To convert decimal into percent, multiply by 100 and put the % sign.

$$\therefore \text{Percentage of } 0.3751 = \frac{3751}{10000} \times 100 = 37.51\,\%$$

Solution 10:

To convert decimal into percent, multiply by 100 and put the % sign.

$$\therefore \text{Percentage of } 0.9812 = \frac{9812}{10000} \times 100 = 98.12\%$$

Practice – 4

Solution 1(1):

7% means 7 out of 100.

100	7
1200	(?)

$$7\% \text{ of } 1200 = \frac{1200 \times 7}{100} = 84$$

Solution 1(2):

12% means 12 out of 100 .

100	12
550	(?)

$$12\% \text{ of } 550 = \frac{550 \times 12}{100} = 66$$

Solution 1(3):

45% means 45 out of 100 .

100	45
620	(?)

$$45\% \text{ of } 620 = \frac{620 \times 45}{100} = 279$$

Solution 1(4):

75% means 75 out of 100.

$$75\% \text{ of } 100 = \frac{100 \times 75}{100} = 75$$

Solution 1(5):

8.5% means 8.5 out of 100.

$$8.5\% \text{ of } 2000 = \frac{20000 \times 8.5}{100} = 170$$

Solution 2:

NO. of students who passed the competition= 85% of 60

$$\therefore \text{No. of students who passed the competition} = \frac{85}{100} \times 60 = 51$$

Number of students who passed the competition = 51.

Solution 3:

Number of people who voted in the election = 83% of 3000

$$83\% \text{ of } 3000 = \frac{83}{100} \times 3000 = 2490$$

$\therefore$ Number of people who voted in the election = 2490.

Solution 4:

Amount of discount offered on the book = 49.5% of ₹ 600

$$49.5\% \text{ of } ₹\ 600 = \frac{49.5}{100} \times 600 = 49.5 \times 6 = ₹\ 297$$

$\therefore$ Amount of discount offered on the book is ₹ 297.

Solution 5:

No. of students who can read clearly

$= 88.5\%$ of 600

$= \frac{88.5}{100} \times 600$

$= 88.5 \times 6$

$= 531$

∴ No. of students who can read clearly is 531.