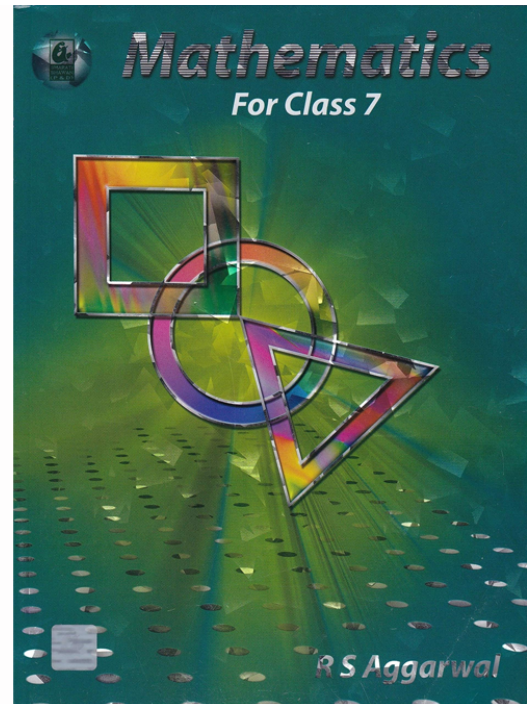


RS Aggarwal Solutions for Class 7

Maths Chapter 10–Percentage

Class 7 - Chapter 10 Percentage



For any clarifications or questions you can write to info@indcareer.com

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<https://www.indcareer.com/schools/rs-aggarwal-solutions-for-class-7-maths-chapter-10-percentage/>



RS Aggarwal Solutions for Class 7 Maths Chapter 10–Percentage

Class 7: Maths Chapter 10 solutions. Complete Class 7 Maths Chapter 10 Notes.

RS Aggarwal Solutions for Class 7 Maths Chapter 10–Percentage

RS Aggarwal 7th Maths Chapter 10, Class 7 Maths Chapter 10 solutions

Ex 10A

Question 1.

Solution:

<https://www.indcareer.com/schools/rs-aggarwal-solutions-for-class-7-maths-chapter-10-percentage/>

$$(i) \frac{47}{100} = \frac{47}{100} \times 100 = 47\%$$

$$(ii) \frac{9}{20} = \frac{9}{20} \times 100 = 45\%$$

$$(iii) \frac{3}{8} = \frac{3}{8} \times 100 = \frac{75}{2} = 37\frac{1}{2}\% = 37.5\%$$

$$(iv) \frac{8}{125} = \frac{8}{125} \times 100 = \frac{32}{5} = 6.4\%$$

$$(v) \frac{19}{500} = \frac{19}{500} \times 100 = \frac{19}{5} = 3.8\%$$

$$(vi) \frac{4}{15} = \frac{4}{15} \times 100 = \frac{80}{3} = 26\frac{2}{3}\%$$

$$(vii) \frac{2}{3} = \frac{2}{3} \times 100 = \frac{200}{3} = 66\frac{2}{3}\%$$

$$(viii) 1\frac{3}{5} = \frac{8}{5} \times 100 = 160\%$$

Question 2.

Solution:

<https://www.indcareer.com/schools/rs-aggarwal-solutions-for-class-7-maths-chapter-10-percentage/>

$$(i) 32\% = \frac{32}{100} = \frac{8}{25}$$

$$(ii) 6\frac{1}{4}\% = \frac{25}{4 \times 100} = \frac{1}{16}$$

$$(iii) 26\frac{2}{3}\% = \frac{80}{3 \times 100} = \frac{4}{15}$$

$$(iv) 120\% = \frac{120}{100} = \frac{6}{5} = 1\frac{1}{5}$$

$$(v) 6.25\% = 6\frac{1}{4}\% = \frac{25}{4 \times 100} = \frac{1}{16}$$

$$(vi) 0.8\% = \frac{8}{10 \times 100} = \frac{1}{125}$$

$$(vii) 0.06\% = \frac{0.06}{100} = \frac{6}{100 \times 100} = \frac{3}{5000}$$

$$(viii) 22.75\% = \frac{22.75}{100} = \frac{2275}{100 \times 100} = \frac{91}{400}$$

Question 3.

Solution:

$$(i) 43\% = \frac{43}{100} = 43 : 100$$

$$(ii) 36\% = \frac{36}{100} = \frac{9}{25} = 9 : 25$$

$$(iii) 7.5\% = \frac{75}{10 \times 100} = \frac{3}{40} = 3 : 40$$

$$(iv) 125\% = \frac{125}{100} = \frac{5}{4} = 5 : 4$$

Question 4.

<https://www.indcareer.com/schools/rs-aggarwal-solutions-for-class-7-maths-chapter-10-percentage/>

Solution:

$$(i) 37 : 100 = \frac{37}{100}$$

$$= \frac{37}{100} \times 100 = 37\%$$

$$(ii) 16 : 25 = \frac{16}{25} = \frac{16}{25} \times 100 = 64\%$$

$$(iii) 3 : 5 = \frac{3}{5} = \frac{3}{5} \times 100$$
$$= 3 \times 20 = 60\%$$

$$(iv) 5 : 4 = \frac{5}{4} = \frac{5}{4} \times 100 = 125\%$$

Question 5.

Solution:

$$(i) 45\% = \frac{45}{100} = 0.45 \quad (iii) 3.6\% = \frac{3.6}{100} = 0.036$$

$$(ii) 127\% = \frac{127}{100} = 1.27 \quad (iv) 0.23\% = \frac{0.23}{100} = 0.0023$$

Question 6.

Solution:

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$$0.6 = \frac{6}{10} = \frac{6}{10} \times 100 = 60\%$$

$$(ii) 0.42 = \frac{42}{100} \times 100 = 42\%$$

$$(iii) 0.07 = \frac{7}{100} \times 100 = 7\%$$

$$(iv) 0.005 = \frac{5}{1000} \times 100 = \frac{5}{100} = 0.5\%$$

Question 7.

Solution:

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$$\begin{aligned}\text{(i) } 32\% \text{ of } 425 &= 425 \times \frac{32}{100} \\ &= 17 \times 8 = 136\end{aligned}$$

$$\text{(ii) } 16\frac{2}{3}\% \text{ of } 16$$

$$= 16 \times \frac{50}{3 \times 100} = \frac{8}{3} = 2\frac{2}{3}$$

$$\text{(iii) } 6.5\% \text{ of } 400$$

$$= 400 \times \frac{6.5}{100} = 26$$

$$\text{(iv) } 136 \text{ of } 70$$

$$= \frac{70 \times 136}{100} = \frac{7 \times 68}{5} = \frac{476}{5} = 95.2$$

$$\text{(v) } 2.8\% \text{ of } 35$$

$$= \frac{35 \times 2.8}{100} = \frac{7 \times 0.7}{5} = \frac{4.9}{5} = 0.98$$

$$\text{(vi) } 0.6\% \text{ of } 45$$

$$\begin{aligned}&= \frac{45 \times 0.6}{100} = \frac{45 \times 6}{100 \times 10} = \frac{9 \times 3}{100} = \frac{27}{100} \\ &= 0.27\end{aligned}$$

Question 8.

Solution:

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(i) 25% of Rs. 76

$$= \text{Rs. } 76 \times \frac{25}{100} = \text{Rs. } 19$$

(ii) 20% of Rs. 132

$$= \text{Rs. } 132 \times \frac{20}{100} = \text{Rs. } \frac{132}{5}$$

$$= \text{Rs. } 26.40$$

(iii) 7.5% of 600 m

$$= 600 \times \frac{7.5}{100} = 45 \text{ m}$$

(iv) $3\frac{1}{3}\%$ of 90 km

$$= 90 \times \frac{10}{3 \times 100} = 3 \text{ km}$$

(v) 8.5% of 5 kg

$$= 5 \times \frac{8.5}{100} = \frac{5 \times 85}{100 \times 10} = \frac{17}{40} \text{ kg}$$

$$= \frac{17}{40} \times 1000 = 425 \text{ g}$$

(vi) 20% of 12 litres

$$= 12 \times \frac{20}{100} = \frac{12}{5} \text{ l} = 2.4 \text{ litres}$$

Question 9.

Solution:

Let x is the required number

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$$\therefore 13\% \text{ of } x = 65$$

$$\Rightarrow \frac{13}{100} \times x = 65$$

$$\Rightarrow x = \frac{65 \times 100}{13} = 500$$

$$\therefore \text{Required number} = 500$$

Question 10.**Solution:**

Let x be the required number

$$\therefore 6\frac{1}{4}\% \text{ of } x = 2$$

$$\Rightarrow \frac{25}{4 \times 100} \times x = 2$$

$$\Rightarrow x = \frac{2 \times 4 \times 100}{25} = 32$$

$$\therefore \text{Required number} = 32$$

Question 11.**Solution:**

$$10\% \text{ of Rs. } 90 = 90 \times \frac{10}{100} = \text{Rs. } 9$$

$$\text{Required amount} = \text{Rs. } 90 + \text{Rs. } 9 = \text{Rs. } 99$$

Question 12.**Solution:**

$$20\% \text{ of Rs. } 60 = 60 \times \frac{20}{100} = 12$$

$$\text{Required amount} = \text{Rs. } 60 - 12 = \text{Rs. } 48$$

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Question 13.**Solution:**

$$3 \% \text{ of } x = 9$$

$$\Rightarrow x \times \frac{3}{100} = 9$$

$$\therefore x = 9 \times \frac{100}{3} = 300$$

Question 14.**Solution:**

$$12.5 \% \text{ of } x = 6$$

$$\Rightarrow x \times 12.5100 = 6$$

$$\therefore x = \frac{6 \times 100}{12.5} = \frac{6 \times 10 \times 100}{125} = 48$$

$$\therefore x = 48$$

Question 15.**Solution:**

$$\text{Let } x \% \text{ of } 84 = 14$$

$$\Rightarrow 84 \times \frac{x}{100} = 14$$

$$\Rightarrow x = \frac{14 \times 100}{84} = \frac{50}{3}$$

$$\Rightarrow x = 16\frac{2}{3}$$

$$\therefore 16\frac{2}{3}\%$$

Question 16.

Solution:

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(i) Required percentage = $\frac{15}{120} \times 100$

$$= \frac{25}{2} \% = 12.5\%$$

(ii) 36 minutes of 2 hours or 120 minutes

$$\therefore \text{Required percentage} = \frac{36}{120} \times 100$$

$$= 30\%$$

(iii) 8 hours of 2 days or 8 hours of 48 hours

$$\therefore \text{Required percentage} = \frac{8}{48} \times 100$$

$$= \frac{5}{3} = 16\frac{2}{3} \%$$

(iv) 160 metres of 4 km or 160 metres of 4000 m

$$\therefore \text{Required percentage} = \frac{160}{4000} \times 100$$

$$= 4\%$$

(v) 175 mL of 1 litre or 175mL of 1000mL

$$\text{Required percentage} = \frac{175}{1000} \times 100$$

$$= 17.5\%$$

(vi) 25 paise of Rs. 4 or 25 paise of 400 paise

$$\therefore \text{Required percentage} = \frac{25}{400} \times 100$$

$$= \frac{25}{4} = 6\frac{1}{4} \%$$

Ex 10B

Question 1.

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Solution:

Rupesh scored 495 marks out of 750

Percentage of marks = $\frac{495}{750} \times 100 = 66\%$

Question 2.**Solution:**

Monthly salary = Rs. 15625

Increase = 12%

Amount of increase = $15625 \times \frac{12}{100} = \text{Rs. } 1875$

New salary = Rs. 15625 + Rs. 1875 = Rs. 17500

Question 3.**Solution:**

Excise duty in the beginning = Rs. 950

Reduced duty = Rs. 760

Reduction = Rs. 950 – Rs. 760 = Rs. 190

Reduction percent = $\frac{190}{950} \times 100 = 20\%$

Question 4.**Solution:**

Let x be the total cost of the T.V

96% of x = 10464

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$$\Rightarrow x \times \frac{96}{100} = 10464$$

$$\Rightarrow x = \frac{10464 \times 100}{96}$$

$$\Rightarrow x = 10900$$

Total cost of T.V = Rs. 10900

Question 5.

Solution:

Let number of students = x

In a school boys = 70%

girls = $100 - 70 = 30\%$

Now 30% of x = 504

$$\Rightarrow x \times \frac{30}{100} = 504$$

$$x = \frac{504 \times 100}{30} = 1680$$

Number of boys = $1680 - 504 = 1176$

and number of total students = 1680

Question 6.

Solution:

Copper required = 69 kg

copper in ore = 12%

Let quantity of ore = x kg

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12% of $x = 69$

$$\Rightarrow \frac{12}{100} \times x = 69$$

$$\Rightarrow x = \frac{69 \times 100}{12} = 575 \text{ kg}$$

Quantity of ore = 575kg

Question 7.

Solution:

Pass marks = 36%

A student gets marks = 123

But failed by 39 marks

Pass marks = $123 + 39 = 162$

Now, 36% of maximum marks = 162

Maximum marks = $162 \times \frac{100}{36} = 450$ marks

Question 8.

Solution:

Let number of apples = x

Number of apples sold = 40% of x

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$$= \frac{40x}{100} = \frac{2}{5}x$$

$$\therefore \text{Remaining apples} = x - \frac{2}{5}x = \frac{5x - 2x}{5}$$

$$= \frac{3x}{5}$$

$$\therefore \frac{3x}{5} = 420$$

$$\Rightarrow x = \frac{420 \times 5}{3} \Rightarrow x = 700$$

Hence number of apples = 700

Question 9.

Solution:

Let total number of examinees = x

the numbers of examinees who passed = 72% of x

$$= \frac{72}{100}x$$

$$= \frac{18}{25}x$$

$$\therefore \text{Balance who failed} = x - \frac{18x}{25}$$

$$= \frac{25x - 18x}{25} = \frac{7x}{25}$$

$$\therefore \frac{7x}{25} = 392$$

$$\Rightarrow x = \frac{392 \times 25}{7}$$

$$\Rightarrow x = 56 \times 25 = 1400$$

$$\therefore \text{Total number of examinees} \\ = 1400$$

Question 10.

Solution:

Let the gross value of moped = x

Amount of commission = 5% of x

$$= \frac{5}{100} \times x = \frac{x}{20}$$

$$\text{Net amount of moped} = x - \frac{x}{20}$$

$$= \frac{20x - x}{20} = \frac{19x}{20}$$

$$\therefore \frac{19x}{20} = 15200$$

$$\Rightarrow x = \frac{15200 \times 20}{19} = 800 \times 20$$

$$\Rightarrow x = 16000$$

$$\therefore \text{Gross value of moped} = \text{Rs. } 16000$$

Question 11.

<https://www.indcareer.com/schools/rs-aggarwal-solutions-for-class-7-maths-chapter-10-percentage/>

Solution:

Total gunpowder = 8 kg

Amount of nitre = 75%

amount of sulphur = 10%

Rest of powder which is charcoal = $100 - (75 + 10) = 100 - 85 = 15 = 15\%$

Amount of charcoal = $8 \times 15/100 = 1.2$ kg

= 65 kg = 1 kg 200 grams = 1.2 kg

Question 12.**Solution:**

Quantity of chalk = 1 kg or 1000 g

$$\begin{aligned}\text{Quantity of carbon} &= 3\% \text{ of } 1000 = \frac{3 \times 1000}{100} \\ &= 30\text{g}\end{aligned}$$

$$\begin{aligned}\text{Quantity of calcium} &= 10\% \text{ of } 1000 \\ &= \frac{10 \times 1000}{100} = 100 \text{ g}\end{aligned}$$

$$\begin{aligned}\text{and quantity of oxygen} &= 12\% \text{ of } 1000 \\ &= \frac{12 \times 1000}{100} = 120\text{g}\end{aligned}$$

Question 13.**Solution:**

Let total number of days on which the

school open = x

and Sonal's attendance = 75%

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$$x \times 75\% = 219$$

$$\Rightarrow \frac{x \times 75}{100} = 219 \Rightarrow x = \frac{219 \times 100}{75}$$

$$\Rightarrow x = 73 \times 4 = 292$$

No. of days on which was school open = 292 days

Question 14.

Solution:

Rate of commission = 3%

Amount of commission = Rs. 42660

Let value of property = x

then 3% of x = 42660

$$\Rightarrow \frac{x \times 3}{100} = 42660$$

$$\Rightarrow x = \frac{42660 \times 100}{3} = 1422000$$

$\therefore$ Value of property = Rs. 1422000

Question 15.

Solution:

Total votes of the constituency = 60000

Votes polled = 80% of total votes

$$= 80100 \times 60000 = 48000$$

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Votes polled in favour of A = 60% of polled votes

$$= 60100 \times 48000 = 28800$$

Votes polled in favour of B = $48000 - 28800 = 19200$

Question 16.

Solution:

Let original price of shirt = Rs. x

Discount = 12%

$$\therefore \text{Amount of discount} = 12\% \text{ of } x = \frac{12x}{100}$$

$$\begin{aligned}\text{Sale price} &= x - \frac{12x}{100} = \frac{100x - 12x}{100} \\ &= \frac{88}{100}x\end{aligned}$$

$$\therefore \frac{88}{100}x = 1188$$

$$\begin{aligned}x &= \frac{1188 \times 100}{88} = \frac{1188 \times 100}{100 \times 88} = 54 \times 25 \\ &= 1350\end{aligned}$$

Original price of shirt = Rs. 1350

Question 17.

Solution:

Let original price of sweater = x

Rate of increase = 8%

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Increased price = $x + 8\%$ of x

$$= x + \frac{8}{100}x = \frac{100x + 8x}{100}$$

$$= \frac{108}{100}x$$

$$\therefore \frac{108}{100}x = 1566$$

$$\Rightarrow x = \frac{1566 \times 100}{108}$$

$$\Rightarrow x = \frac{1566 \times 100}{108} = 29 \times 50 = 1450$$

Hence, original price of sweater = Rs. 1450

Question 18.

Solution:

Let total income = x

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$$\begin{aligned}\text{Amount spent} &= 80\% \text{ of } x = \frac{80}{100} \times x \\ &= \frac{4}{5}x\end{aligned}$$

$$\text{Balance} = x - \frac{4}{5}x = \frac{5x - 4x}{5} = \frac{x}{5}$$

$$\text{Amount given in a charity} = 10\% \text{ of } \frac{x}{5}$$

$$= \frac{10}{100} \times \frac{x}{5} = \frac{x}{50}$$

$$\text{Balance amount left} = \frac{x}{5} - \frac{x}{50}$$

$$\frac{10x - x}{50} = \frac{9}{50}x$$

$$\therefore \frac{9}{50}x = 46260$$

$$\Rightarrow x = \frac{46260 \times 50}{9}$$

$$\Rightarrow x = 5140 \times 50 = 257000$$

$$\therefore \text{Total income} = \text{Rs. } 257000$$

Question 19.

Solution:

Let the given number = 100

Then increase % = 20%

$$\begin{aligned}\therefore \text{Increased number} &= \frac{100 \times (100 + 20)}{100} \\ &= \frac{100 \times 120}{100} = 120\end{aligned}$$

Rate of decrease = 20%

$$\begin{aligned}\therefore \text{Decreased number} &= \frac{120 \times (100 - 20)}{100} \\ &= \frac{120 \times 80}{100} = 96\end{aligned}$$

$$\text{Decrease} = 100 - 96 = 4$$

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Decrease per cent = 4%

Question 20.

Solution:

Let original salary of the officer = Rs. 100

Increase = 20%

$$\begin{aligned}\therefore \text{Increased salary} &= \frac{100 \times (100 + 20)}{100} \\ &= \frac{100 \times 120}{100} = \text{Rs. } 120\end{aligned}$$

Amount to be decreased in order to restore the original salary = $120 - 100 = \text{Rs. } 20$ % decrease = $\frac{20 \times 100}{120} = \frac{50}{3} = 16\frac{2}{3}\%$

Question 21.

Solution:

Rate of commission = 2% on first Rs. 200000

1 % on next Rs. 200000 and 0.5% on remaining price

Sale price of property = Rs. 200000 + 200000 + 140000 = Rs. 540000

Now commission earned by the

= Rs. 200000 x 2% + Rs. 200000 x 1% + 140000 x 0.5%

$$\begin{aligned}&= 200000 \times \frac{2}{100} + 200000 \times \frac{1}{100} \\ &+ \frac{140000 \times 1}{100 \times 2} \\ &= \text{Rs. } (4000 + 2000 + 700) = \text{Rs. } 6700\end{aligned}$$

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Question 22.**Solution:**

Let Akhil's income = Rs. 100

Then income of Nikhil's will be = Rs. $100 - 20 = \text{Rs. } 80$

Amount which is more than that of Akhil's = $100 - 80 = \text{Rs. } 20$

% age = $20 \times 100 / 80 = 25\%$

Question 23.**Solution:**

Let income of Mr Thomas = Rs. 100

then income of John = Rs. $100 + 20 = \text{Rs. } 120$

Income of Mr Thomas is less than John = Rs. $120 - 100 = \text{Rs. } 20$

% age = $20 \times 100 / 120$

= $50/3 = 16\frac{2}{3} \%$

Question 24.**Solution:**

Present value of machine = Rs. 387000

Rate of depreciation = 10%

Let 1 year ago the value of machine was = x

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$$\therefore \text{Present value} = \frac{x \times (100 - 10)}{100}$$

$$= \frac{90}{100}x = \frac{9}{10}x$$

$$\therefore \frac{9}{10}x = 387000$$

$$\Rightarrow x = \frac{387000 \times 10}{9}$$

$$\Rightarrow x = 430000$$

1 year ago, value of machine = Rs. 430000

Question 25.

Solution:

Present value of car = Rs. 450000

Rate of decreasing of value = 20%

Value after 2 years

$$= \text{Rs. } 450000 \times \frac{(100 - 20)}{100} \times \frac{(100 - 20)}{100}$$

$$= \text{Rs. } 450000 \times \frac{80}{100} \times \frac{80}{100}$$

$$= \text{Rs. } 288000$$

Question 26.

Solution:

Present population = 60000

Rate of increase = 10%

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Increased population after 2 years

$$\begin{aligned} &= 60000 \times \frac{(100+10)}{100} \times \frac{(100+10)}{100} \\ &= 60000 \times \frac{110}{100} \times \frac{110}{100} = 72600 \end{aligned}$$
$$\begin{aligned} \therefore \text{Sugar worth Rs. 100} &= \frac{100 \times 100}{125} \\ &= 80 \text{ kg} \\ \therefore \text{Decrease in consumption} &= 100 - 80 \\ &= 20 \text{ kg} \\ \therefore \text{Decrease \%} &= \frac{20 \times 100}{100} = 20\% \end{aligned}$$

Ex 10C

Objective Questions :

Mark (✓) against the correct answer in each of the following :

Question 1.

Solution:

$$(b) 34 = 34 \times 100 = 75 \%$$

Question 2.

Solution:

(c)

$$2 : 5 = 25 = 25 \times 100 = 40\%$$

Question 3.

Solution:

(c)

$$8\frac{1}{3}\% = \frac{25}{3 \times 100} = \frac{1}{12}$$

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Question 4.**Solution:**

(c) $x\%$ of 75 = 9

$$\Rightarrow \frac{x}{100} \times 75 = 9$$

$$\Rightarrow x = \frac{9 \times 100}{75} = 12$$

Question 5.**Solution:**

(d)

$$\text{Let } x\% \text{ of } \frac{2}{7} = \frac{1}{35} \Rightarrow \frac{x}{100} \times \frac{2}{7} = \frac{1}{35}$$

$$\Rightarrow x = \frac{100 \times 7}{35 \times 2} = 10\%$$

Question 6.**Solution:**

(b)

Let $x\%$ of 1 day = 36 minutes

$$\Rightarrow \frac{x}{100} \times 24 \times 60 \text{ minutes} = 36 \text{ minutes}$$

$$\Rightarrow x = \frac{36 \times 100}{24 \times 60} = \frac{5}{2} = 2.5\%$$

Question 7.

<https://www.indcareer.com/schools/rs-aggarwal-solutions-for-class-7-maths-chapter-10-percentage/>

Solution:

(a)

Let x be the required number

$$\therefore \frac{x \times (100 + 20)}{100} = 42$$

$$\Rightarrow \frac{x \times 120}{100} = 42$$

$$\Rightarrow x = \frac{42 \times 100}{120} = 35$$

Question 8.

Solution:

(b)

Let x be the required number, then

$$x = \frac{400 \times 100}{5} = 8000 \text{ g} = 8 \text{ kg}$$

Question 9.

Solution:

(d)

Let ore = x, then

5% of x = 400g

$x \times 5 = 400$

<https://www.indcareer.com/schools/rs-aggarwal-solutions-for-class-7-maths-chapter-10-percentage/>

$$x = \frac{400 \times 100}{5} = 8000 \text{ g} = 8 \text{ kg}$$

Question 10.**Solution:**

(b)

Let gross value of T.V = x

Commission = 10%

After deducting commission, the value

$$\text{of T.V.} = \frac{x \times (100 - 10)}{100} =$$

$$\therefore \frac{x \times 90}{100} = 18000$$

$$\Rightarrow x = \frac{18000 \times 100}{90} \Rightarrow x = 20000$$

Question 11.**Solution:**

(b)

Increase in salary = 25%

Let original salary = x

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$$\text{Then } \frac{x \times (100 + 25)}{100} = 20000$$

$$\Rightarrow \frac{x \times 125}{100} = 20000$$

$$\Rightarrow x = \frac{20000 \times 100}{125} = 16000$$

$\therefore$ Original salary = Rs. 16000

Question 12.

Solution:

(c)

Let x be the number of total examinees

No. of examinees passed

$$= \frac{x \times 95}{100} = \frac{19}{20}x$$

$$\text{No. of examinees failed} = x - \frac{19}{20}x$$

$$= \frac{20x - 19x}{20} = \frac{x}{20}$$

$$\therefore \frac{x}{20} = 28$$

$$\Rightarrow x = 28 \times 20 = 560$$

$\therefore$ No. of total examinees = 560

Question 13.

Solution:

(c)

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Let total number of apples = x

$$\text{Apples which were sold} = \frac{x \times 40}{100} = \frac{2}{5}x$$

$$\text{Balance} = x - \frac{2}{5}x = \frac{5x - 2x}{5} = \frac{3x}{5}$$

$$\therefore \frac{3x}{5} = 420 \Rightarrow x = \frac{420 \times 5}{3} = 700$$

$$\therefore \text{Total number of apples} = 700$$

Question 14.

Solution:

(b)

Present value of machine = Rs. 25000

Rate of depreciation = 10% p.a.

Value of machine after one year

$$= \text{Rs. } 25000 \times \frac{(100 - 10)}{100} = \text{Rs. } 25000 \times \frac{90}{100} = \text{Rs. } 22500$$

Question 15.

Solution:

(c) Let x be numbers

$$\text{Then } 8\% \text{ of } x = 6 \Rightarrow x = \frac{6}{8\%}$$

$$\Rightarrow x = \frac{6 \times 100}{8} = 75$$

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Question 16.**Solution:**

(c) 60% of 450

$$= 60\% \times 450 = 270$$

Question 17.**Solution:**

(d) Rate of reduction = 6%

Price after reduction = Rs. 658

$$\begin{aligned}\therefore \text{Original price} &= \frac{\text{Reduced price} \times 100}{100 - \text{reduction}\%} \\ &= \text{Rs. } \frac{658 \times 100}{100 - 6} = \frac{658 \times 100}{94} \\ &= \text{Rs. } 700\end{aligned}$$

Question 18.**Solution:**

(b) Boys = 70% of students

No. of girls = 240

Girls percentage = $100 - 70 = 30\%$

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$$\therefore \text{Total students} \times \frac{30}{100} = 240$$

$$\text{Total student} = \frac{240 \times 100}{30} = 800$$

$$\therefore \text{No. of boys} = 800 - 240 = 560$$

Question 19.

Solution:

(c) Let number = x

$$11\% \text{ of } x - 7\% \text{ of } x = 18$$

$$\begin{aligned} 4\% \text{ of } x = 18 &\Rightarrow x = \frac{18}{4\%} = \frac{18 \times 100}{4} \\ &= 450 \end{aligned}$$

Question 20.

Solution:

(a) Let number = x

$$35\% \text{ of } x + 39 = x$$

$$x - \frac{35}{100}x = 39 \Rightarrow \frac{65}{100}x = 39$$

$$x = \frac{39 \times 100}{65} = 60$$

Question 21.

Solution:

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(c) Pass marks = 36%

A students get =145 marks

But failed by 3 5 marks

Then pass marks = 145 + 35 = 180

Maximum marks = $180 \times \frac{100}{36} = 500$

Question 22.

Solution:

(d) Let number be = x

Then decreasing by 40%

$$= \frac{x \times 40}{100} = \frac{40x}{100}$$

According to the condition,

$$x - \frac{40x}{100} = 135$$

$$\frac{60x}{100} = 135 \Rightarrow x = \frac{135 \times 100}{60}$$

$$\Rightarrow x = 45 \times 5 = 225$$



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He was born on January 2, 1946 in a village of Delhi. He graduated from Kirori Mal College, University of Delhi. After completing his M.Sc. in Mathematics in 1969, he joined N.A.S. College, Meerut, as a lecturer. In 1976, he was awarded a fellowship for 3 years and joined the University of Delhi for his Ph.D. Thereafter, he was promoted as a reader in N.A.S. College, Meerut. In 1999, he joined M.M.H. College, Ghaziabad, as a reader and took voluntary retirement in 2003. He has authored more than 75 titles ranging from Nursery to M. Sc. He has also written books for competitive examinations right from the clerical grade to the I.A.S. level.

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