**Question:1**

If 15 oranges cost Rs 110, what do 39 oranges cost?

**Solution:**

Cost of 15 oranges = Rs 110

Cost of 1 orange = Rs $\frac{110}{15}$

∴ Cost of 39 oranges = Rs $\frac{110}{15} \times 39$ = Rs 286

**Question:2**

If 8 kg sugar costs Rs 260, how much sugar can be bought for Rs 877.50?

**Solution:**

Amount of sugar bought for Rs 260 = 8 kg

Amount of sugar bought for Re 1 = $\frac{8}{260}$ kg

Now, amount of sugar bought for Rs 877.50 = $\frac{8}{260} \times 877.50$ kg = 27 kg

∴ 27 kg of sugar can be bought for Rs 877.50.

**Question:3**

The cost of 37 m of silk is Rs 6290. What length of this silk can be purchased for 4420?

**Solution:**

Length of the silk purchased for Rs 6290 = 37 m

Length of the silk purchased for Re 1= $\frac{37}{6290}$ m

Now, length of the silk purchased for Rs 4,420 = $\frac{37}{6290} \times 4420$ m = 26 m

∴ 26 m of silk can be purchased for Rs 4,420.

**Question:4**

A worker is paid Rs 1110 for 6 days. If his total wages during a month are Rs 4625, for how many days did he work?

**Solution:**

Number of days for which a worker is paid Rs 1,110 = 6

Number of days for which a worker is paid Re 1 = $\frac{6}{1110}$ days

Now, number of days for which a worker is paid Rs 4625=$\frac{6}{1110} \times 4625$ days = 25 days

∴ The worker worked 25 days in a month.

**Question:5**

A car can cover a distance of 357 km on 42 litres of petrol. How far can it travel on 12 litres of petrol?

**Solution:**

Distance covered by the car with 42 L of petrol = 357 km

Distance covered by the car with 1 L of petrol = $\frac{357}{42}$ km

$$lesspetrol, lessdistance$$

Now, distance covered by the car with 12 L of petrol = $\frac{357}{42} \times 12$ = 102 km

$$morepetrol, moredistance$$

**Question:6**

Travelling 900 km by rail costs Rs 2520. What would be the fare for a journey of 360 km when a person travels by the same class?

**Solution:**

Cost of travelling 900 km by train = Rs 2520

Cost of travelling 1 km by train = Rs $\frac{2520}{900}$

Now, cost of travelling 360 km by train =Rs $\frac{2520}{900} \times 360$ = Rs 1008

∴ The train fare for a journey of distance 360 km is Rs 1,008.

**Question:7**

A train covers a distance of 51 km in 45 minutes. How long will it take to cover 221 km?

**Solution:**

Time taken to cover a distance of 51 km = 45 min

Time taken to cover a distance of 1 km = $\frac{45}{51}$ min

Time taken to cover distance of 221 km = $\frac{45}{51} \times 221$ min = 195 min = 3 h 15 min

∴ The train will take 3 h 15 min to cover a distance of 221 km.

**Question:8**

If 22.5 metres of a uniform iron rod weighs 85.5 kg, what will be the length of 22.8 kg of the same rod?

**Solution:**

Length of the iron rod that weighs 85.5 kg = 22.5 m

Length of the iron rod that weighs 1 kg = $\frac{22.5}{85.5}$ m

$$lessweight, lesslength$$

∴ Length of the iron rod that weighs 22.8 kg = $\frac{22.5}{85.5} \times 22.8$ m = 6 m

$$moreweight, morelength$$

**Question:9**

If the weight of 6 sheets of a paper is 162 grams, how many sheets of the same quality of paper would weigh 13.5 kg?

**Solution:**

Number of paper sheets that weighs 162 g = 6

Number of paper sheets that weighs 1 g = $\frac{6}{162}$

$$lessweight, lesssheets$$

∴ Number of paper sheets that weighs 13.5 kg = $\frac{6}{162} \times 13.5 \times 1000 = 500$

$$moreweight, moresheets$$

**Question:10**

1152 bars of soap can be packed in 8 cartons of the same size. How many such cartons will be required to pack 3888 bars?

**Solution:**

Number of cartons needed to pack 1152 soap bars = 8

Number of cartons needed to pack 1 soap bar = $\frac{8}{1152}$

$$lessnumberofsoaps, lessnumberofcartonsneeded$$

Now, number of cartons needed to pack 3888 soap bars = $\frac{8}{1152} \times 3888 = 27$

$$moresoaps, morecartonneeded$$

∴ 27 cartons are needed to pack 3888 soap bars.

**Question:11**

If the thickness of a pile of 16 cardboards is 44 mm, how many cardboards will be there in a pile which is 71.5 cm thick?

**Solution:**

Number of cardboards in a pile of thickness 44 mm = 16

Number of cardboards in a pile of thickness 1 mm = $\frac{16}{44}$

Number of cardboards in a pile of thickness 71.5 cm = $\frac{16}{44} \times 71.5 \times 10 = 260$

$$1cm = 10mm$$

∴ 260 cardboards will be there in a pile of thickness 71.5 cm.

**Question:12**

At a particular time of a day, a 7-m-high flagstaff casts a shadow which is 8.2 m long. What is the height of the building which casts a shadow 20.5 metres in length at the same moment?

**Solution:**

Height of the flagstaff that casts a shadow of length 8.2 m = 7 m

Height of the building that casts a shadow of length 1 m = $\frac{7}{8.2}$ m

Height of the building that casts a shadow of length 20.5 m = $\frac{7}{8.2} \times 20.5$ m = 17.5 m

∴ The height of the required building is 17.5 m.

**Question:13**

15 men can build a 16.25-m-long wall up to a certain height in one day. How many men should be employed to build a wall of the same height but of length 26 metres in one day?

**Solution:**

Number of men employed to built the 16.25 m long wall = 15

Number of men required to built a 1 m long wall = $\frac{15}{16.25}$

Number of men that should be employed to built a 26 m long wall = $\frac{15}{16.25} \times 26$ = 24

∴ 24 men should be employed to build a wall of length 26 m in a day.

**Question:14**

In a hospital, the monthly consumption of milk of 60 patients is 1350 litres. How many patients can be accommodated in the hospital if the monthly ration of milk is raised to 1710 litres, assuming that the quota per head remains the same?

**Solution:**

Number of patients who can consume 1350 L of milk = 60

Number of patients who can consume 1 L of milk = $\frac{60}{1350}$

Now, number of patients who can consume 1710 L of milk = $\frac{60}{1350} \times 1710$ = 76

Hence, 76 patients can be accommodated in the hospital if the monthly ration of milk is raised to 1710 L.

**Question:15**

The extension in an elastic string varies directly as the weight hung on it. If a weight of 150 g produces an extension of 2.8 cm, what weight would produce an extension of 19.6 cm?

**Solution:**

Weight that would produce an extension of 2.8 cm = 150 g

Weight that would produce an extension of 1 cm = $\frac{150}{2.8}$ g

Weight that would produce an extension of 19.6 cm = $\frac{150}{2.8} \times 19.6$ = 1050 g = 1 kg 50 g

$$1kg = 1000g$$

∴ A weight of 1 kg 50 g would produce an extension of 19.6 cm.

**Question:16**

If 48 men can dig a trench in 14 days, how long will 28 men take to dig a similar trench?

**Solution:**

48 men can dig a trench in 14 days.

1 man can dig the trench in 14 $\times$ 48 days.

$$lessmen, moredays$$

Therefore, 28 men can dig the trench in $\frac{14 \times 48}{28}$ days = 24 days

$$moremen, lessdays$$

Hence, 28 men will take 24 days to dig a similar trench.

**Question:17**

16 men can reap a field in 30 days. How many men must be engaged to reap the same field in 24 days?

**Solution:**

No. of men required to reap the field in 30 days = 16

No. of men required to reap the field in 1 day = 16 $\times$30 $lessdays, moremen$

Now, no. of men required to reap the field in 24 days = $\frac{16 \times 30}{24}$ = 20 $moredays, lessmen$

∴ 20 men are required to reap the field in 24 days.

**Question:18**

45 cows can graze a field in 13 days. How many cows will graze the same field in 9 days?

**Solution:**

Number of cows that can graze the field in 13 days = 45

Number of cows that can graze the field in 1 day = 45 $\times$13

$$Lessdays, morecows$$

Therefore, number of cows that can graze the field in 9 days = $\frac{45 \times 13}{9}$ = 65

$$More days, less cows$$

Hence, 65 cows can graze the field in 9 days.

**Question:19**

16 horses can consume a certain quantity of corn in 25 days. In how many days would the same quantity be consumed by 40 horses?

**Solution:**

Time taken by 16 horses to consume the corn = 25 days

Time taken by 1 horse to consume the corn = $25 \times 16$

$$less horses, more time taken$$

Time taken by 40 horses to consume the corn = $\frac{25 \times 16}{40}$ = 10 days

$$more horses, less time taken$$

Hence, 40 horses would consume the same quantity of corn in 10 days.

**Question:20**

A girl can finish a book in 25 days if she reads 18 pages of it every day. How many days will she take to finish it, if she reads 15 pages every day?

**Solution:**

Days taken to finish the book if 18 pages are read everyday = 25

Days taken to finish the book if 1 page is read everyday = $18 \times 25$

$$less pages, more days$$

Now, days taken to finish the book if 15 pages are read everyday = $\frac{18 \times 25}{15}$ = 30

$$more pages, less days$$

Hence, the girl will take 30 days to finish the book if she reads 15 pages everyday.

**Question:21**

Reeta type 40 words per minute and takes 24 minutes to type a certain document. Her friend Geeta has a typing speed of 48 words per minute. In how much time, will she be able to type the same document?

**Solution:**

Time taken to type 40 words per minute = 24 min
Time taken to type a word per minute = $24 \times 40$ min
Now, time taken to type 48 words per minute = $\frac{24 \times 40}{48}$ = 20 min

Hence, Geeta will take 20 minutes to type the same document if her typing speed is 48 words/min.

**Question:22**
A bus covers a certain distance in 3 hours 20 minutes at an average speed 45 km/h. How long will it take to cover the same distance at a speed of 36 km/h?
**Solution:**
Time taken to cover the distance at a speed of 45 km/h = 3 h 20 min = 200 min
Time taken to cover the distance at a speed of 1 km/h = 45 $\times$ 3.33 min

$$lesspeed, moretime$$

Time taken to cover the distance at a speed of 36 km/h = $\frac{45 \times 3.33}{36}$ = 4.1625 h ≈ 4 h 10 min

Hence, the bus will take 4 h 10 min to cover the distance if its speed is 36 km/h.

**Question:23**
At the beginning of a month, a factory has enough materials to make 240 tonnes of steel in a month. If 60 more tonnes of steel is to be made that month, how long will the materials last?
**Solution:**
Time taken to make 240 tonnes of steel = 30 days
Time taken to make 1 tonne of steel = 30 $\times$ 240 days
Now, time taken to make 300 or $240 + 60$ tonnes of steel = $\frac{30 \times 240}{300}$ = 24 days

∴ The materials will last for 24 days if 60 more tonnes of steel is to be made that month.

**Question:24**
A contractor employed 210 men to build a house in 60 days. After 12 days, he was joined by 70 more men. In how many days will the remaining work be finished?
**Solution:**
Initially, the contractor had 210 men for 60 days. After 12 days, 70 more men joined.

210 men can finish the work in 48 days
1 man can finish the work in $210 \times 48$ days
Now, 280 men can finish the work in $\frac{210 \times 48}{280}$ days = 36 days.

Hence, it will take 36 days to finish the remaining work.

**Question:25**

A military camp has provisions for 360 men to last for 25 days. How many men must be transferred to another camp so that the food lasts for 30 days?

**Solution:**

No. of men for which the provision will last for 25 days = 360

No. of men for which the provision will last for 1 day = 360 $\times$25

Now, no. of men for which the provision will last for 30 days = $\frac{360\times25}{30}$ = 300

$\therefore$ 60 men, i.e., $360-300$, must be transferred to another camp so that the provision lasts for 30 days.

**Question:26**

A group of 120 men had provisions for 200 days. After 5 days, 30 men died due to an epidemic. How long will the remaining food last?

**Solution:**

Number of days for which the food is sufficient for 120 men = 195

Number of days for which food is sufficient for 1 man = 120$\times$195

Number of days for which food is sufficient for 90 men = $\frac{120\times195}{90}$ = 260

Hence, the food will last for 260 days.

**Question:27**

1200 soldiers in a fort had enough food for 28 days. After 4 days, some soldiers were transferred to another fort and thus the food lasted for an extra 32 days. How many soldiers left the fort?

**Solution:**

We are given that in a fort, 1200 soldiers had enough food for 28 days.

Let *x* soldiers left after 4 days, thus, remaining soldiers = 1200 - *x*

Now, for these remaining soldiers food lasts for 32 days.

As number of soldiers decrease, food lasts long.

Thus, situation after 4 days is

$1200\times24=(1200-x)\times32\Rightarrow(1200-x)=\frac{1200\times24}{32}\Rightarrow1200-x=900\Rightarrow x=1200\ -\ 900\Rightarrow x=300$

Thus, 300 soldiers left the fort after 4 days.

**Question:28**

***Mark ✓ against the correct answer***

If 4.5 m of a uniform rod weighs 17.1 kg, what is the weight of 12 m of such a rod?

$a$ 51.2 kg
$b$ 53 kg
$c$ 45.6 kg
$d$ 56 kg
**Solution:**
$c$ 45.6 kg

Weight of the rod of length 4.5 m = 17.1 kg
Weight of the rod of length 1 m = $\frac{17.1}{4.5}$ kg

$$less length, less weight$$

$\therefore$ Weight of the rod of length 12 m = $\frac{17.1}{4.5} \times 12$ = 45.6 kg

$$more length, more weight$$

**Question:29**
***Mark ✓ against the correct answer***
In a map, 0.8 cm represents 8.8 km. How much distance will be represented by 80.5 cm?

$a$ 805 km
$b$ 855.5 km
$c$ 644 km
$d$ none of these
**Solution:**

$d$ none of these

0.8 cm represents 8.8 km.

1 cm represents $\frac{8.8}{0.8}$ km.

80.5 cm represents $\frac{8.8}{0.8} \times 80.5$ = 885.5 km.

**Question:30**
***Mark ✓ against the correct answer***
In a race, Raghu covers 5 km in 20 minutes, how much distance will he cover in 50 minutes?

$a$ 10.5 km
$b$ 12 km
$c$ 12.5 km
$d$ 13.5 km
**Solution:**
Distance covered in 20 min = 5 km
Distance covered in 1 min = $\frac{5}{20}$ km

$$less time, less distance covered$$

Distance covered in 50 min = $\frac{5}{20} \times 50$ = 12.5 km

$$more time, more distance covered$$

Hence, Raghu will cover a distance of 12.5 km in 50 minutes.

Thus, the correct option is $c$.

**Question:31**
***Mark ✓ against the correct answer***
A garrison of 500 men had provisions for 24 days. However, a reinforcement of 300 men arrived. The food will now last for

$a$ 18 days
$b$ $17\frac{1}{2}$ days
$c$ 16 days
$d$ 15 days
**Solution:**
Number of days for which 500 men have enough food = 24
Number of days for which 1 man has enough food = $24 \times 500$

$$less men, more food$$

Number of days for which 800 men have enough food = $\frac{24 \times 500}{800}$ = 15

$$more men, less food$$

Hence, the food will last for 15 days after the reinforcement of 300 men.

Thus, the correct option is $d$.

**Question:32**

***Mark ✓ against the correct answer***

If $\frac{4}{5}$ of a cistern is filled in 1 minute, how much more time will be required to fill the rest of it?

$a$ 20 seconds

$b$ 15 seconds

$c$ 12 seconds

$d$ 10 seconds

**Solution:**

Time taken to fill $\frac{4}{5}$ of a cistern = 1 min

Time taken to fill 1 cistern $= \frac{5}{4}$ min

Time taken to fill $\frac{1}{5}$ of a cistern = $\frac{5}{4} \times \frac{1}{5} = \frac{1}{4}$ min = 15 seconds

Hence, it will take 15 seconds to fill the rest of the cistern.

Thus, the correct option is $b$.

**Question:33**

***Mark ✓ against the correct answer***

If 21 cows eat as much as 15 buffaloes, how many cows will eat as much as 35 buffaloes?

$a$ 49

$b$ 56

$c$ 45

$d$ none of these

**Solution:**

Number of cows that eat as much as 15 buffaloes = 21

Number of cows that eat as much as 1 Buffalo = $\frac{21}{15}$

Number of cows that eat as much as 35 buffaloes = $\frac{21}{15} \times 35$ = 49

Hence, 49 cows will eat as much as 35 buffaloes.

Thus, the correct option is $a$.

**Question:34**

***Mark ✓ against the correct answer***

A tree, 6 m tall, casts a 4-m-long shadow. At the same a flag pole casts a 50-m-long shadow. How long is the flag pole?

$a$ 50 m

$b$ 75 m

$c$ $33\frac{1}{3}$ m

$d$ none of these

**Solution:**

$b$ 75 m

Height of the tree that casts a 4 m long shadow = 6 m

Height of the tree that casts a 1 m long shadow = $\frac{6}{4}$ m

∴ Height of the flag pole that casts a 50 m long shadow = $\frac{6}{4} \times 50$ = 75 m

**Question:35**

***Mark ✓ against the correct answer***

8 men can finish a piece of work in 40 days. If 2 more men join them, the work will be completed in

$a$ 30 days

$b$ 32 days

$c$ 36 days

$d$ 25 days

**Solution:**

8 men finish the work in 40 days.

1 man can finish the work in 8×40 days.

$$Less men, more days$$

10 men can finish the work in $\frac{8 \times 40}{10}$ = 32 days.

$$More men, less days$$

∴ If 2 more men join them, the work will be completed in 32 days.

The correct option is $b$.

**Question:36**

***Mark ✓ against the correct answer***

If 16 men can reap a field in 30 days, in how many days will 20 men reap the same field?

$a$ $10\frac{2}{3}$ days

$b$ 24 days

$c$ 25 days

$d$ $37\frac{1}{2}$ days

**Solution:**

Number of days taken to reap the field by 16 men = 30 days

Number of days taken to reap the field by 1 man = 30×16 days

$$Less men, more days$$

Number of days taken to reap the field by 20 men = $\frac{30 \times 16}{20}$ = 24 days

$$More men, less days$$

Hence, 20 men will take 24 days to reap the field.

The correct option is $b$.

**Question:37**

***Mark ✓ against the correct answer***

10 pipes of the same diameter can fill a tank in 24 minutes. If 2 pipes go out of order, how long will the remaining pipe take to fill the tank?

$a$ 40 min
$b$ 45 min
$c$ 30 min
$d$ $19\frac{1}{5}$ min

**Solution:**

Time taken to fill the tank by 10 pipes = 24 min
Time taken to fill the tank by 1 pipe = 24 $\times$10 min

$$Less pipes, more time taken$$

Time taken to fill the tank by 8 pipes = $\frac{24 \times 10}{8}$ min = 30 min

$$More pipes, less time taken$$

Hence, it will take 30 minutes to fill the tank if two pipes go out of order.

The correct option is $c$.

**Question:38**

***Mark ✓ against the correct answer***

6 dozen eggs are bought Rs 108. How much will 132 eggs cost?

$a$ Rs 204
$b$ Rs 264
$c$ Rs 184

$d$ Rs 198

**Solution:**

Cost of 72 eggs = Rs 108

Cost of 1 egg = Rs $\frac{108}{72}$

Cost of 132 eggs = RS $\frac{108}{72} \times 132$ = Rs 198

Hence, 132 eggs will cost Rs 198.

The correct option is $d$.

**Question:39**

***Mark ✓ against the correct answer***

12 workers take 4 hours to complete a job. How long would it take 15 workers to complete the job?

$a$ 2 hrs 40 min

$b$ 3 hrs 12 min

$c$ 3 hrs 24 min

$d$ 3 hrs 30 min

**Solution:**

Time taken by 12 workers to complete the job = 4 h

Time taken by 1 worker to complete the job = $4 \times 12$ h

Time taken by 15 workers to complete the job = $\frac{4 \times 12}{15}$ = 3 h 12 min

Hence, 15 workers will complete the job in 3 h 12 min.

The correct option is $b$.

**Question:40**

***Mark ✓ against the correct answer***

A garrison of 500 men had provisions for 27 days. After 3 days, a reinforcement of 300 men arrived. The remaining food will now last for how many days?

$a$ 15 days

$b$ 16 days

$c$ $17\frac{1}{2}$ days

$d$ 18 days

**Solution:**

500 men had enough food for 24 days.

1 man had enough food for $24 \times 500$ days.

$$Less men, more days$$

800 men had enough food for $\frac{24\times500}{800}$ = 15 days

$$More men, less days$$

Hence, the food will now last for 15 days after the reinforcement of 300 men.

The correct option is $a$.

**Question:41**

***Mark ✓ against the correct answer***

A rope makes 140 rounds of the circumference of a cylinder, the radius of whose base is 14 cm. How many times can it go round a cylinder with radius 20 cm?

$a$ 28
$b$ 17
$c$ 98
$d$ 200

**Solution:**

$c$ 98

No. of rounds around the cylinder of radius 14 cm = 140
No. of rounds around the cylinder of radius 1 cm = $140 \times 14$

$$Less radius, more rounds$$

No. of rounds around the cylinder of radius 20 cm = $\frac{140\times14}{20}$ = 98

$$More radius, less rounds$$

Hence, the rope makes 98 rounds around the circumference of the cylinder of radius 20 cm.

**Question:42**

***Mark ✓ against the correct answer***

A worker makes a toy every $\frac{2}{3}$ hour. If he works for 7 $\frac{1}{3}$ hours, then how many toys will he make?

$a$ 22
$b$ 18
$c$ 16

$d$ 11

**Solution:**

No. of toys made in $\frac{2}{3}$ h = 1

No. of toys made in 1 h = $\frac{3}{2}$

No. of toys made in $7\frac{1}{3}$ h = $\frac{3}{2} \times \frac{22}{3} = 11$

Hence, the worker will make 11 toys in $7\frac{1}{3}$ h.

The correct option is $d$.

**Question:43**

***Mark ✓ against the correct answer***

10 men can finish the construction of a wall in 8 days. How meny men are added to finish the work in half a day?

$a$ 160

$b$ 100

$c$ 120

$d$ 150

**Solution:**

Men required to finish the work in 8 days = 10

Men required to finish the work in 1 day = $10 \times 8$

$$More day, less men$$

Men required to finish the work in half a day = $\frac{10 \times 8}{\frac{1}{2}} = 10 \times 8 \times 2$ = 160

$$Less days, more men$$

Hence, 150 $i.e., 160 - 10$ men are added to finish the work in half a day.

The correct option is $d$.

**Question:44**

If the cost of 8 toys is Rs 192, what will be the cost of 14 such toys?

**Solution:**

Cost of 8 toys = Rs 192

Cost of 1 toy = Rs $\frac{192}{8}$ = Rs 24

$\therefore$ Cost of 14 toys = $24 \times 14$ = Rs 336

**Question:45**

A car can cover 270 km in 15 litres of petrol. How many kilometres will it cover in 8 litres of petrol?

**Solution:**

Distance covered with 15 L of petrol= 270 km

Distance covered with 1 L of petrol = $\frac{270}{15}$ km

Distance covered with 8 L of petrol= $\frac{270}{15} \times 8$ km = 144 km

**Question:46**

If 15 envelopes cost Rs 11.25, what is the cost of 20 such envelopes?

**Solution:**

Cost of 15 envelopes = Rs 11.25

Cost of 1 envelope = Rs $\frac{11.25}{15}$

∴ Cost of 20 envelopes = $\frac{11.25}{15} \times 20$ = Rs 15

**Question:47**

24 cows can graze a field in 20 days. How many cows can graze it in 15 days?

**Solution:**

Number of cows that graze the field in 20 days = 24

Number of cows that graze the field in 1 day = 24×20

$$Less days, more cows$$

∴ Number of cows that graze the field in 15 days = $\frac{24 \times 20}{15}$ = 32 cows

$$More days, less cows$$

**Question:48**

8 men can finish a piece of work in 15 hours. In how many hours can 20 men finish it?

**Solution:**

Time taken to finish the work by 8 men = 15 h

Time taken to finish the work by 1 man = 8×15 h

$$Less men, more time taken$$

∴ Time taken to finish the work by 20 men = $\frac{8 \times 15}{20}$ h = 6 h

$$More men, less time taken$$

**Question:49**

If $\frac{4}{5}$ of a cistern is filled in 1 minute, how much time will be required to fill the empty cistern?

**Solution:**

Time taken to fill $\frac{4}{5}$ of the cistern = 1 min

Time taken to fill 1 cistern = $\frac{1}{\frac{4}{5}} = \frac{5}{4}$ = 1.25 min = 1 min 15 sec

Hence, it will take 1 min 15 sec to fill the empty cistern.

**Question:50**

A bus covers a certain distance in 3 hours 20 minutes at an average speed of 45 km per hour. How much time will it take to cover the same distance at a speed of 50 km per hour?

**Solution:**

Time taken to cover the distance at a speed of 45 km/h = 3 h 20 min

Time taken to cover the distance at a speed of 1 km/h = 45 $\times$ 3.33 h

$$Lessspeed, moretimetaken$$

$20min = 0.33hour$

∴ Time taken to cover the distance at a speed of 50 km/h = $\frac{45 \times 3.33}{50}$h ≈ 3 h

$$Morespeed, lesstimetaken$$

**Question:51**

In a fort, 120 men had provisions for 30 days. For how many days is the food sufficient for 100 men?

**Solution:**

Number of days with enough food for 120 men = 30

Number of days with enough food for 1 man = $30 \times 120$

$$Lessmen, moredays$$

∴ Number of days with enough food for 100 men = $\frac{30 \times 120}{100}$ = 36

$$Moremen, lessdays$$

**Question:52**

***Mark ✓ against the correct answer***

In a map, 1 cm represents 8 km. How much distance will be represented by 80.5 cm?

$a$ 640 km
$b$ 642 km
$c$ 644 km
$d$ 648 km
**Solution:**
$c$ 644 km
1 cm represents 8 km.
$\therefore$ 80.5 cm represents $8 \times 80.5$ = 644 km.

**Question:53**
***Mark ✓ against the correct answer***
If 16 men can reap a field in 30 days, in how many days will 20 men reap the same field?

$a$ 24 days
$b$ 25 days
$c$ $10\frac{2}{3}$ days
$d$ $37\frac{1}{2}$ days
**Solution:**
$a$ 24 days

16 men can reap the field in 30 days.
1 man can reap the field in $30 \times 16$ days.

$$Less men, more days$$

$\therefore$ 20 men can reap the field in $\frac{30 \times 16}{20}$ = 24 days

$$More men, less days$$

**Question:54**
***Mark ✓ against the correct answer***
If 21 cows eat as much as 15 buffaloes, how many cows will eat as much as 35 buffaloes?

$a$ 45
$b$ 49
$c$ 56
$d$ 54
**Solution:**
$b$ 49

Number of cows that eat as much as 15 buffaloes = 21

Number of cows that eat as much as 1 buffalo = $\frac{21}{15}$

∴ Number of cows that eat as much as 35 buffaloes = $\frac{21}{15} \times 35$ = 49

**Question:55**

***Mark ✓ against the correct answer***

45 cows can graze a field in 12 days. How many cows will graze the same field in 9 days?

$a$ 60 days
$b$ $38\frac{3}{4}$ days
$c$ 54 days
$d$ none of these

**Solution:**

Number of cows that graze the field in 12 days = 45

Number of cows that graze the field in 1 day = $45 \times 12$

∴ Number of cows that graze the field in 9 days = $\frac{45 \times 12}{9}$ = 60

**Question:56**

***Mark ✓ against the correct answer***

6 dozen eggs are bought for Rs 108. How much will 108 eggs cost?

$a$ Rs 171
$b$ Rs 162
$c$ Rs 153
$d$ Rs 180

**Solution:**

$b$ Rs 162

Cost of 72 eggs = Rs 108
Cost of 1 egg =Rs $\frac{108}{72}$

Cost of 108 eggs = Rs $\frac{108 \times 108}{72}$ = Rs 162

**Question:57**

***Fill in the blanks.***

$i$ If 42 men can dig a trench in 14 days, then 1 man can dig it in ..... days.
$ii$ If 15 oranges cost Rs 60, then 12 oranges cost Rs ..... .

$iii$ If 10 metres of a uniform rod weighs 18 kg, then the weight of 6 metres of the rod is ..... kg.
$iv$ If 12 workers finish a piece of work in 4 hours, then 15 workers will finish it in ..... hrs ..... min.

**Solution:**

$i$ 588 days
42 men can dig the trench in 14 days.
1 man can dig the trench in 14 $\times$ 42 days = 588 days

$ii$ Rs. 48
15 oranges cost Rs 60.
12 oranges will cost Rs $\frac{60}{15} \times 12$ = Rs 48

$iii$ 10.8 kg
A rod of length 10 m weighs 18 kg.
A rod of length 6 m will weigh $\frac{18}{10} \times 6$ = 10.8 kg

$iv$ 3 h 12 min
12 workers finish the work in 4 h.
15 workers will finish the work in $\frac{4\times12}{15}$ = 3.2 h = 3 h 12 min

**Question:58**

***Write 'T' for true and 'F' for false***

$i$ If 10 pipes of the same diameter can fill a tank in 24 minutes, then 8 pipes would fill it in 19 min 20 sec.
$ii$ If 8 men can finish a piece of work in 40 days, then 10 men can finish it in 32 days.
$iii$ A tree 6 m tall casts a shadow of length 4 m. At the same time a flag casts a shadow of length 50 m. The lenght of the pole is 75 m.
$iv$ If a worker takes $\frac{2}{3}$ hour to make a toy, then he will make 12 toys in 8 hours.

**Solution:**

$i$ F
10 pipes fill the tank in 24 min.
1 pipe will fill the tank in 24 $\times$10 min. $Less pipes, more time taken$
8 pipes will fill the tank in $\frac{24\times10}{8}$ = 30 min $More pipes, less time taken$

$ii$ T
8 men finish the work in 40 days.
1 man finishes the work in 8$\times$40 days. $Less men, more days taken$
10 men will finish the work in $\frac{8\times40}{10}$ = 32 days $More men, less days taken$

$iii$ T
A 6 m tall tree casts a shadow of length 4 m.
A 1 m tall tree cast a shadow of length $\frac{4}{6}$ m.
A 75 m tall pole will cast a shadow of length $\frac{4}{6} \times 75$ =50 m

$iv$ T

1 toy is made in $\frac{2}{3}$ h. $Less toys, less time taken$

12 toys can be made in $\frac{2}{3} \times 12$ = 8 h $More toys, more time taken$