RS Aggarwal Class 7 Mathematics Solutions

Unitary Method

Exercise 9A

Q1

Answer :

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

Q2

Answer :

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.

Q3

Answer :

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.

Q4

Answer :

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.

Q5

Answer :

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 [less petrol, less distance]

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

Q6

Answer :

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.

Q7

Answer :

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.

Q8

Answer :

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 [less weight, less length]

∴ Length of the iron rod that weighs 22.8 kg = $\frac{22.5}{85.5} \times 22.8$ m = 6 m [more weight, more length]

Q9

Answer :

Number of paper sheets that weighs 162 g = 6

Number of paper sheets that weighs 1 g = $\frac{6}{162}$ [less weight, less sheets]

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

Q10

Answer :

Number of cartons needed to pack 1152 soap bars = 8

Number of cartons needed to pack 1 soap bar = $\frac{8}{1152}$ [less number of soaps, less number of cartons needed]

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

∴ 27 cartons are needed to pack 3888 soap bars.

Q11

Answer :

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 [1 cm=10 mm]

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

Q12

Answer :

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.

Q13

Answer :

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.

Q14

Answer :

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.

Q15

Answer :

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 [1 kg = 1000 g]