

13. Direct and Inverse Proportions

Q 1 If 9 kg of rice costs Rs 166.50, how much rice can be purchased for Rs 259?

Mark (1)

Q 2 If a car covers 80 km in 5 litres of petrol, how much distance will it cover in 13 litres of petrol?

Mark (1)

Q 3 If 32 men can reap a field in 15 days, in how many days can 20 men reap the same field?

Mark (1)

Q 4 If 36 men can do a work in 25 days, in how many days will 15 men do the same work?

Mark (1)

Q 5 If 4 kg of potatoes cost Rs 60, what is the cost of 12 kg of potatoes?

Mark (1)

Q 6 A tank travels 15 km in 25 minutes. If the speed remains the same, how far can it travel in 1 hour and 5 minutes?

Mark (1)

Q 7 The cost of 5 metres of cloth is Rs 350. Find the cost of 7 metres of cloth.

Mark (1)

Q 8 A 14 metres stick casts a shadow of 10 metres. Find the height of a stick which casts a shadow of 15 metres under similar conditions.

Mark (1)

Q 9 A train is moving with uniform speed of 80 km/hr. How far will it travel in 35 minutes?

Mark (1)

Q 10 18 workers can build a wall in 26 hours, how many workers will be required to do the same work in 13 hours?

Mark (1)

Q 11 There are 100 students in a hostel. The food provision for them is for 15 days. How long will the provision last if 20 more join the group?

Marks (2)

Q 12 12 men can dig a trench in 8 days. How many men can dig the same in 6 days?

Marks (2)

Q 13 A garrison of 500 men had provision for 24 days. However, a reinforcement of 300 men arrived. How long the food will last?

Marks (2)

Q 14 At 60 km/hour a car takes 2 hours to reach its destination. How long will the car take if it travels at a speed of 80 km/hr?

Marks (2)

Q 15 The number of bottles made by a factory in 63 days is 315. How many bottles can it make in 82 days?

Marks (2)

Q 16 A road map with a scale of 1 cm represents 36 km. When Ravi drives on a road for 144 km, what would be the distance covered by him on the map?

Marks (2)

Q 17 If a train is moving at a uniform speed of 75 km/hour, find the time required to cover the distance of 300 km.

Marks (2)

Q 18 A car can finish a journey in 10 hours at the speed of 48 km/hr. By how much should its speed be increased so that it may take only 8 hours to cover the same distance?

Marks (2)

Q 19 Reema types 540 words in half-hour. How many words would she type in 6 minutes?

Marks (2)

Q 20 If 56 men can do a piece of work in 42 days, how many men are required to complete it in 14 days?

Marks (3)

Q 21 The scale of a map is given as 1 : 40000000. Two cities are 4 cm apart on the map. Find the actual distance between them.

Marks (3)

Q 22 12 pipes are required to fill a tank in 2 hours 40 minutes. How long will it take if only 10 pipes of the same type are used?

Marks (3)

Q 23 If a box of sweets is divided among 48 children, they will get 7 sweets each. How many would each get, if the number of the children is reduced by 6?

Marks (3)

Q 24 A batch of bottles were packed in 25 boxes with 12 bottles in each box. If the same batch is packed using 20 bottles in each box, how many boxes would be filled?

Marks (3)

Q 25 A school has 8 periods a day each of 45 minutes duration. How long would each period be, if the school has 9 periods a day, assuming the number of school hours to be same?

Marks (3)

Q 26 120 men had food provision for 195 days. How long would the food last if there are 90 men?

Marks (3)

Q 27 18 men can reap a field in 35 days. Find the number of men required to reap the same field in 15 days.

Marks (3)

Q 28 Working for 8 hours daily, 40 people can dig the foundation of a building in 21 days. Working for 10 hours daily, if the work is to be finished in 14 days, how many people are needed to do the same work?

Marks (4)

Q 29 6 typists working 5 hours a day can type the manuscript of a book in 16 days. How many days will 4 typists take to do the same job each working 6 hours a day?

Marks (4)

Q 30 A hostel spends Rs. 3200 as cost of rice for 20 students for 30 days. If the hostel spends Rs. 2400 for 30 students, for how many days will the rice last?

Marks (4)

Q 31 A school hostel with 40 children has enough provisions for food to last for 15 days. If 10 children left the hostel, how many days will the provisions last now?

Marks (4)

Q 32 A train can finish a journey in 10 hours, travelling at a speed of 56 km/h. If another faster train is to cover the same journey in 8 hours, what would be the average speed of the new train?

Marks (4)

Q 33 10 men working for 6 days mow an area of 5 acres. If there are 8 men working to mow 4 acres of land, how many days will it take?

Marks (4)

Q 34 A family of 8 people has enough stock of rice to last for 30 days. Due to the arrival of some relatives, this food was consumed in 20 days. How many guests joined the family?

Marks (4)

Q 35 In an army camp, there are 800 soldiers. There is enough food for them for 60 days. If 400 more soldiers arrive at the camp, how many days will the food last?

Marks (4)

Most Important Questions

Q 1 The variables x and y are in direct proportion, based on this relation fill the table

x	12	x_2	8	15
y	60	5	y_3	y_4

Q 2 If the cost of 5 pens is Rs.20, what will the cost of 9 such pens?

Q 3 Raja covers a distance of 18 km in 1 hour, how much time will he need to travel a distance of 8 Km.

Q 4 A milk factory can fill 480 bottles in 6 hours. How many bottles will it fill in 3 hours?

Q 5 The scale of a map is given as 1:30000000. Two cities are 4 cm apart on the map. What is the actual distance between them?

Q 6 A car is moving at a uniform speed of 75 km/hr.
How far will it travel in 20 minutes?
Find the time required to cover a distance of 250 km.

Q 7 In the model of a fort, the flag is 9 m high, however the flag of the actual ship is 12 m high. If the height of the actual fort is 28 m what is the height of the model fort.

Q 8 If the weight of 7 bags is 560 kg, what is the weight of 14 such bags?

Q 9 If 18 earrings cost Rs 1,530 what is the cost of 13 such earrings?

Q 10 The variables x and y are in indirect proportion, based on this relation fill the table

x	12	x_2	8	15
y	60	5	y_3	y_4

Q 11 A fort had provisions for food for 300 men over a period of 90 days. After 20 days, 50 men left the fort. How long would the food last at the same rate?

Q 12 A hostel had provisions for 75 students for 30 days. After 6 days, 15 more students come to the hostel. How long will the remaining provisions last at the same rate?

Q 13 6 pipes are required to fill a tank in 1 hour 20 min. How long will it take if only 5 pipes of the same type are used?

Q 14 If 15 workers can build a wall in 48 hours, how many workers will be required to do the same work in 30 hours?

Q 15 If a box of toffees is divided among 24 children, they will get 5 toffees each. How many toffees will each get if the number of children is reduced by 4?

Q 16 A factory of socks requires 42 machines to produce a given number of socks in 63 days, how many machines are required to produce the same number of socks in 54 days?

Q 17 A farmer has enough grains to feed 20 hens for a period of 6 days. How long will the food last if there were 10 more hens with him?

Q 18 A car takes 2 hours to reach a destination by traveling 60 km/hr. How long will it take when the car travels at the speed of 80 km/hr.