



MATHS

BOOKS - RS AGGARWAL MATHS (HINGLISH)

DIRECT AND INVERSE PROPORTIONS

Examples

1. Observe the tables given below and find whether X and Y are directly proportional:

(i)

x	3	5	7	9	12
y	6	10	14	18	24

(ii)

x	4	7	12	15
y	12	21	36	60



[Watch Video Solution](#)

2. If x and y are directly proportional, find the values of x_1 , x_2 and y_1 in the table given below.



[Watch Video Solution](#)

3. A car covers 432 km in 36 litres of petrol. How much distance would it cover in 25 liters of petrol?



[Watch Video Solution](#)

4. If 50 metres of a cloth costs Rs 3725, how much cloth can be purchased for Rs 1788?



[Watch Video Solution](#)

5. If the weight of 9 sheets of thick paper is 30 grams, how many sheets of the same paper would weigh $1\frac{1}{4}$ kilograms?



[Watch Video Solution](#)

6. A train is moving at a uniform speed of 75 km/hr.

(i) How far will it travel in 24 minutes?

(ii) In how much time will it cover 175 km?



[Watch Video Solution](#)

7. A vertical pole 5 m 60 cm high casts a shadow 3 m 20 cm long. Find at the same time

(i) the length of shadow cast by another pole 10 m 50 cm high.

(ii) the height of a pole which casts a shadow 5 m long.



[Watch Video Solution](#)

8. The scale of a map is $1 : 3 \times 10^7$. Two cities are 5 cm apart on the map. Find the actual

distance between them in kilometers.

A. 1350km

B. 1450km

C. 1550km

D. 1500km

Answer: D



Watch Video Solution

9. If 5 men or 7 women can earn Rs 875 per day, how much would 10 men and 5 women earn per day?

A. Rs 2375

B. Rs 3375

C. Rs. 4375

D. Rs. 5375

Answer: A



Watch Video Solution

10. Observe the tables given below and find whether X and Y are inversely proportional:

(i)

x	6	3	36	72	16
y	24	48	4	2	9

(ii)

x	9	12	6	2	1
y	4	3	8	18	36



[Watch Video Solution](#)

11. If x and y are inversely proportional, find the values of X_1 , X_2 , Y_1 and Y_2 in the table given below:

x	12	16	x_1	x_2	48
y	8	y_1	4	16	y_2



Watch Video Solution

12. If 45 men can do a piece of work in 49 days, in how many days will 35 men do it?

A. 63

B. 53

C. 43

D. 33

Answer: A



 [Watch Video Solution](#)

13. If 14 workers can build a wall in 45 hours, how many workers will be required to do the same work in 35 hours?



[Watch Video Solution](#)

14. 6 pipes can fill a tank in 1 hour 24 minutes. How long will it take to fill the tank if 7 pipes of the same type are used?



[Watch Video Solution](#)

15. In a fort, 300 men had provisions for 90 days. After 20 days, 50 men left the fort How long would the food last at the same rate?



Watch Video Solution

Exercise 12 A

1. Observe the tables given below and in each one find whether x and y are proportional:

(i)

x	3	5	8	11	26
y	9	15	24	33	78

(ii)

x	2.5	4	7.5	10	14
y	10	16	30	40	42

(iii)

x	5	7	9	15	18	25
y	15	21	27	60	72	75



[Watch Video Solution](#)

2. If x and y are directly proportional, find the values of x_1 , x_2 and y_1 in the table given below:

x	3	x_1	x_2	10
y	72	120	192	y_1



[Watch Video Solution](#)

3. A truck covers a distance of 510 km in 34 liters of diesel. How much distance would it cover in 20 litres of diesel?



[Watch Video Solution](#)

4. A taxi charges a fare of Rs 2550 for a journey of 150 km. How much would it charge for a journey of 124 km?



[Watch Video Solution](#)

5. A loaded truck covers 16 km 25 minutes. At the same speed, how far can it travel in 5 hours?

A. 182 km

B. 192 km

C. 190 km

D. 194 km

Answer: B



Watch Video Solution

6. If 18 dolls cost Rs630, how many dolls can be bought for Rs 455?



Watch Video Solution

7. If 9 kg of sugar costs Rs 238.50, how much sugar can be bought for Rs 371?



Watch Video Solution

8. The cost of 15 metres of a cloth is Rs 981.
What length of this cloth can be purchased for
Rs 1308?



Watch Video Solution

9. In a model of a ship, the mast is 9 cm high,
while the mast of the actual ship is 15 m high.
If the length of the ship is 35 metres, how long
is the model ship?



Watch Video Solution

10. In 8 days, the earth picks up (6.4×10^7) kg of dust from the atmosphere. How much dust will it pick up in 15 days?



Watch Video Solution

11. A car is travelling at the average speed of 50 km/hr. How much distance would it travel in 1 hour 12 minutes?



Watch Video Solution

12. Ravi walks at the uniform rate of 5 km/hr. What distance would he cover in 2 hours 24 minutes?



Watch Video Solution

13. If the thickness of a pile of 12 cardboards is 65 mm, find the thickness of a pile of 312 such cardboards.



Watch Video Solution

14. 11 men can dig $6\frac{3}{4}$ metre long trench in one day. How many men should be employed for digging 27 metre long trench of the same type in one day?



Watch Video Solution

15. Reenu types 540 words during half an hour. How many words would she type in 8 minutes?



Watch Video Solution

Exercise 12 B

1. Observe the tables given below and in each case find whether x and y are inversely proportional:

(i)

x	6	10	14	16
y	9	15	21	24

(ii)

x	5	9	15	3	45
y	18	10	6	30	2

(iii)

x	9	3	6	36
y	4	12	9	1



Watch Video Solution

2. If x and y are inversely proportional, find the values of X_1 , X_2 , Y_1 and Y_2 in the table given below:

x	8	x_1	16	x_2	80
y	y_1	4	5	2	y_2

- A. $x_1 = 2, x_2 = 40, y_1 = 1, y_2 = 1$
- B. $x_1 = 20, x_2 = 40, y_1 = 1, y_2 = 1$
- C. $x_1 = 20, x_2 = 40, y_1 = 10, y_2 = 5$
- D. $x_1 = 20, x_2 = 40, y_1 = 10, y_2 = 1$

Answer: D



[Watch Video Solution](#)

3. If 35 men can reap a field in 8 days, in how many days can 20 men reap the same field?



[Watch Video Solution](#)

4. 12 men can dig a pond in 8 days. How many men can dig it in 6 days?



[Watch Video Solution](#)

5. 6 cows can graze a field in 28 days. How long would 14 cows take to graze the same field?



[Watch Video Solution](#)

6. A car takes 5 hours to reach a destination by travelling at the speed of 60 km/hr. How long will it take when the car travels at the speed of 75 km/hr?



[Watch Video Solution](#)

7. A factory requires 42 machines to produce a given number of articles in 56 days. How many machines would be required to produce the same number of articles in 48 days?



[Watch Video Solution](#)

8. 7 taps of the same size fill a tank in 1 hour 36 minutes. How long will 8 taps of the same size take to fill the tank?



[Watch Video Solution](#)

9. 8 taps of the same size fill a tank in 27 minutes. If two taps go out of order, how long would the remaining taps take to fill the tank?



[Watch Video Solution](#)

10. A farmer has enough food to feed 28 animals in his cattle for 9 days. How long would the food last, if there were 8 more animals in his cattle?



[Watch Video Solution](#)

11. A garrison of 900 men had provisions for 42 days. However, a reinforcement of 500 men arrived. For how many days will the food last now?



Watch Video Solution

12. In a hostel, 75 students had food provision for 24 days. If 15 students leave the hostel. For how many days would the food provision last?



Watch Video Solution

13. A school has 9 periods a day each of 40 minutes duration. How long would each period be, if the school has 8 periods a day, assuming the number of school hours to be the same?



Watch Video Solution

14. If x and y vary inversely and $x=15$ when $y=6$, find y when $x=9$.



[Watch Video Solution](#)

15. If x and y vary inversely and $x=18$ when $y=8$, find x when $y=16$.



[Watch Video Solution](#)

Exercise 12 C

1. If 14 kg of pulses cost Rs 882, what is the cost of 22 kg of pulses?

A. Rs 1254

B. Rs 1298

C. Rs 1342

D. Rs 1386

Answer: D



Watch Video Solution

2. If 8 oranges cost Rs 52, how many oranges can be bought for Rs 169?

A. 13

B. 18

C. 26

D. 24

Answer: C



Watch Video Solution

3. A machine fills 420 bottles in 3 hours. How many bottles will it fill in 5 hours ?

A. 252

B. 700

C. 504

D. 300

Answer: B



Watch Video Solution

4. A car is travelling at a uniform speed of 75 km/hr. How much distance will it cover in 20 minutes?

A. 25km

B. 15km

C. 30km

D. 20km

Answer: A



Watch Video Solution

5. The weight of 12 sheets of a thick paper is 40 grams . How many sheets would weigh 1 kg?

A. 480

B. 360

C. 300

D. non of these

Answer: C



Watch Video Solution

6. A pole 14 m high casts a shadow of 10 m. At the same time , what will be the height of a tree, the length of whose shadow is 7 meters?

A. 20m

B. 9.8m

C. 5m

D. non of these

Answer: B



Watch Video Solution

7. A photograph of a bacteria enlarged 50000 times attains a length of 5 cm. The actual length of bacteria is

A. 1000 cm

B. 10^{-3} cm

C. 10^{-4} cm

D. 10^{-2} cm

Answer: C



Watch Video Solution

8. 6 pipes fill tank in 120 minutes, then 5 pipes will it in

A. 100 min

B. 144 min

C. 140 min

D. 108 min

Answer: B



Watch Video Solution

9. 3 persons can build a wall in 4 days, then 4 persons can build it in

A. $5\frac{1}{3}$ days

B. 3 days

C. $4\frac{1}{3}$ days

D. non of these

Answer: B



Watch Video Solution

10. A car takes 2 hours to reach a destination by travelling at the speed of 60 km/h. How

long will it take when the car travels at the speed of 80 km/h?

- A. 1 h 30 min
- B. 1 h 40 min
- C. 2 h 40 min
- D. non of these

Answer: A



Watch Video Solution

1. 350 boxes can be placed in 25 cartons. How many boxes can be placed in 16 cartons?



[Watch Video Solution](#)

2. The cost of 140 tennis balls is Rs 4900. Find the cost of 2 dozen such balls.



[Watch Video Solution](#)

3. The railway fare for 61 km is Rs 183. Find the fare for 53 km.



Watch Video Solution

4. 10 people can dig a trench in 6 days. How many people can dig it in 4 days?



Watch Video Solution

5. 30 men can finish a piece of work in 28 days.

How many days will be taken by 21 men to finish it?



[Watch Video Solution](#)

6. A garrison of 200 men had provisions for 45 days. After 15 days 40 more men join the garrison. Find the number of days for which the remaining food will last.

A. 25 days

B. 26 days

C. 27 days

D. 28 days

Answer: A



Watch Video Solution

**Test Paper 12 Mark Against The Correct Answer In
Each Of The Following**

1. 6 pipes can fill a tank in 24 minutes. One pipe can fill in

A. 4 minutes

B. 30 minutes

C. 72 minutes

D. 144 minutes

Answer: D



Watch Video Solution

2. 14 workers can build a wall in 42 days. One worker can build it in

A. 3 day

B. 147 day

C. 294 day

D. 588 day

Answer: D



Watch Video Solution

3. 35 men can reap a field in 8 days. In how many days can 20 men reap it?

A. 14 day

B. 28 day

C. $87\frac{1}{2}$ day

D. non of these

Answer: A



Watch Video Solution

4. A car is travelling at an average speed of 60 km per hour. How much distance will it cover in 1 hour 12 minutes?

A. 50km

B. 72km

C. 63km

D. 67.2km

Answer: B



Watch Video Solution

5. Rashmi types 510 words in half an hour. How many words would she type in 10 minutes?

A. 85

B. 150

C. 170

D. 153

Answer: C



Watch Video Solution

6. x and y vary directly. When $x=3$, then $y=36$.

What will be the value of x when $y=96$?

A. 18

B. 12

C. 8

D. 4

Answer: C



Watch Video Solution

7. x and y vary inversely. When $x=15$, then $y=6$.

What will be the value of y when $x=9$?

A. 10

B. 15

C. 54

D. 135

Answer: A



Watch Video Solution

Test Paper 12 Fill In The Blanks

1. If 3 persons can do a piece of work in 4 days, then 4 persons can do it in days.

A. 1

B. 2

C. 3

D. 4

Answer: C



Watch Video Solution

2. If 5 pipes can fill a tank in 144 minutes , then
6 pipes can fill it in _____ minutes .

A. 120

B. 130

C. 110

D. 90

Answer: A



Watch Video Solution

3. A car covers a certain distance in 1 hr 30 minutes at 60 km per hour. If it moves at 45 km per hour, It will take _____ hours.

A. 7

B. 5

C. 2

D. 8

Answer: C



Watch Video Solution

4. If 8 oranges cost Rs 20.80, the cost of 5 oranges is Rs.....



[Watch Video Solution](#)

5. The weight of 12 sheets of a paper is 50 grams. How many sheets will weigh 500 grams?



[Watch Video Solution](#)