

Worksheet

- Choose the correct option.
 - If 6 books cost ₹ 108, then 9 books will cost
 - ₹ 54
 - ₹ 162
 - ₹ 972
 - ₹ 180
 - If there are 15 pencils in 5 boxes, then the number of pencils in 8 boxes is
 - 12
 - 36
 - 24
 - 75
 - If 14 bags of rice weigh 70 kg, then 21 bags weigh
 - 140 kg
 - 72 kg
 - 105 kg
 - 108 kg
 - If 5 people can do a piece of work in 28 days, then the number of people to do the work in 7 days is
 - 20
 - 7
 - 28
 - 35
 - If $8\frac{1}{2}$ L milk costs ₹ 340, then the cost of 34 L milk is
 - ₹ 720
 - ₹ 1920
 - ₹ 1360
 - ₹ 960

- Identify the table in which x and y vary directly with each other:

a.

| | | | | |
|-----|----|-----|---|------|
| x | 6 | 1 | 2 | 9 |
| y | 27 | 4.5 | 9 | 40.5 |

b.

| | | | | |
|-----|---|---|---|---|
| x | 9 | 7 | 8 | 5 |
| y | 2 | 4 | 3 | 1 |

- Complete the table:

- a. If y varies inversely as x

| | | | | |
|-----|---|----|----|-----|
| x | 4 | 8 | | 3.2 |
| y | | 16 | 20 | |

- b. If p varies directly as t

| | | | | |
|-----|---|----|----|----|
| p | 5 | 15 | 20 | |
| t | | 12 | | 20 |

- A car consumes 42 L of diesel in covering a distance of 3600 km. How much diesel will be needed to cover a distance of 5400 km?
- A hotel had provisions for 75 persons for 20 days. After 16 days, 15 persons left the hotel. How long will the food last at the same rate?
- Shruti cycles to her coaching centre at an average speed of 18 km/h. It takes her 35 minutes to reach the coaching centre. If she wants to reach the centre in 30 minutes, what should be her average speed?
- X and Y can complete a piece of work in 9 days, Y and Z in 12 days, and Z and X in 18 days. In how many days will they finish it together?
- An oil tank can be filled by a tap in 12 hours and emptied by an outlet pipe in 18 hours. How long will it take to fill the tank if both the tap and pipe are opened together?
- Classify the following as direct and inverse variation:
 - speed and time
 - volume and density
 - work done with number of labour employed
 - milk purchased and price of milk

10. $11\frac{1}{2}$ m of cloth costs ₹ 404.80. What is the cost of $4\frac{3}{4}$ m?
11. 150 tiles are used to cover 625 sq m of area. How many tiles will be required to cover 750 sq m of area?
12. One tap fills a reservoir in 24 minutes and another in 16 minutes. The waste pipe can empty it in 12 minutes. In what time will the reservoir be filled if both the taps are turned on and the waste pipe has been left open by chance?
13. $33\frac{2}{11}$ acres of field is leased for ₹ 10,900. For what amount should $14\frac{3}{4}$ acres of field be leased?
14. A cistern can be filled by one tap in 8 hours, by second tap in 10 hours and by third tap in 20 hours. How long will it take to fill the cistern if all three taps are opened together?

Answers to Worksheet

1. a. ii b. iii c. iii d. i e. iii

2. a. Yes b. No

3. a.

| | | | | |
|---|----|----|-----|-----|
| x | 4 | 8 | 6.4 | 3.2 |
| y | 32 | 16 | 20 | 40 |

b.

| | | | | |
|---|---|----|----|----|
| p | 5 | 15 | 20 | 25 |
| t | 4 | 12 | 16 | 20 |

4. 63 litres
5. 5 days
6. 21 km/h
7. 8 days
8. 36 hours
9. a. Inverse variation b. Inverse variation
c. Direct variation d. Direct variation
10. ₹ 167.20
11. 180 tiles
12. 48 minutes
13. ₹ 4845.27
14. $\frac{40}{11}$ hours