

CBSE Class 8 Maths Worksheet

Direct And Inverse proportions

1. Choose the correct option: Q is directly proportional to p. Q = 21 when p = 9, value of Q when p = 81 is _____.
A) 63
B) 64
C) 56
D) 67
2. State True/False: When two quantities are related in such a manner that, if one increases & other decreases, then they always vary inversely.
A) true
B) false
3. Fill in the blanks: $Y = \frac{3}{x}$ y and x are _____.
4. Kavya travels 10 m distance in 30 steps, then the distance travelled in 90 steps is _____ m.
5. Fill in the blanks: Two quantities a and b are said to be in _____ if they increase (decrease) together in such a manner that the ratio of their corresponding values remains constant.
6. M is directly proportional to L, When $L=2$ & $M=50$ find the value of M when $L=3$
7. State True/False: When the speed is kept fixed, speed & time vary directly with each other.
A) true
B) false
8. State True/False: If 10 persons can finish a job in 20 days then one person will finish it in 2 days.
A) true
B) false
9. Fill in the blanks: When two quantities x and y are in _____ proportion they are written as $x \propto \frac{1}{y}$
10. Fill in the blanks: If $A = 25B$, then A and B vary _____ with each other.

11. Which of the following is in direct proportion?
- A) One side of a cuboid and its volume.
 - B) Speed of a vehicle and the distance travelled in a fixed time interval.
 - C) Change in weight and height among individuals.
 - D) Number of pipes to fill a tank and the time required to fill the same tank.
12. Fill in the blanks: If $y = x$, then both are _____.
13. Fill in the blanks: If $P = Q$, then both are _____
14. A car travels 30 miles in 1 hours. How far would it travel in 5 hours?
15. y is directly proportional to x . When $x = 5$, $y = 25$. Find y when $x = 10$.
16. Choose the correct option: The cost of 2 meters of a particular quality of cloth is Rs 50. Find the cost of 10 meters of cloth of the same type.
- A) Rs.100
 - B) Rs.150
 - C) Rs.200
 - D) Rs.250
17. A train is moving at a uniform speed of 75 km/hour, how far will it travel in 20 minutes?
18. There are 10 grams of protein in 50 grams of chicken breast. How many grams of protein is in 150 gm of that chicken breast?
19. If the weight of 10 sheets of thick paper is 50 grams, how many sheets of the same paper would weigh 600 grams?
20. Which of the following is in direct proportion?
- A) One side of a cuboid and its volume.
 - B) Speed of a vehicle and the distance travelled in a fixed time interval.
 - C) Change in weight and height among individuals.
 - D) Number of pipes to fill a tank and the time required to fill the same tank.

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Answers

1. Option A
2. Option A
3. inversely related
4. 30 m
5. direct proportion
6. 75
7. Option B
8. Option B
9. Inverse
10. Directly
11. Option B
12. directly related to each other
13. directly related to each other
14. 150
15. 50
16. Option D
17. 25 km
18. 30 gms
19. 120
20. Option B

Solution: [Because, in a fixed time interval, as the speed of a vehicle increases, the distance travelled by it also increases in the same ratio.]