



DIRECT AND INVERSE VARIATION

**Q1.** Both  $x$  and  $y$  vary inversely with each other. When  $x$  is 10,  $y$  is 6, which of the following is not a possible pair of corresponding values of  $x$  and  $y$ ?

- (a) 12 and 5
- (b) 15 and 4
- (c) 25 and 2.4
- (d) 45 and 1.3

**Q2.** Assuming land to be uniformly fertile, the area of land and the yield on it vary

- (a) directly with each other
- (b) inversely with each other
- (c) neither directly nor inversely with each other
- (d) sometimes directly and sometimes inversely with each other

**Q3.** A truck needs 54 litres of diesel for covering a distance of 297 km. The diesel required by the truck to cover a distance of 550 km is :

- (a) 100 litres
- (b) 50 litres
- (c) 25.16 litres
- (d) 25 litres

**Q4.** By travelling at a speed of 48 km/h, a car can finish a certain journey in 10 hours. To cover the same distance in 8 hours, the speed of the car should be

- (a) 60 km/h
- (b) 80 km/h
- (c) 30 km/h
- (d) 40 km/h

**Q5.** Which of the following vary inversely with each other?

- (a) Speed and distance covered
- (b) Distance covered and taxi fare
- (c) Distance travelled and time taken**
- (d) Speed and time taken**

**Q6.** Meenakshi cycles to her school at an average speed of 12 km/h and takes 20 minutes to reach her school. If she wants to reach her school in 12 minutes, her average speed should be :

- (a)  $20/3$  km/h
- (b) 16 km/h

- (c) 20 km/h.
- (d) 15 km/h

**Q7.** 100 persons had food provision for 24 days. If 20 persons left the place, the provision will last for

- (a) 30 days
- (b)  $96/5$  days
- (c) 120 days
- (d) 40 days

**Q8.** If two quantities  $x$  and  $y$  vary directly with each other, then

- (a)  $xy$  remains constant
- (b)  $x - y$  remains constant
- (c)  $x + y$  remains constant
- (d)  $x/y$  remains constant

**Q9.** If the distance travelled by a rickshaw in one hour is 10 km, then the distance travelled by the same rickshaw with the same speed in one minute is

- (a)  $250/9$  m
- (b)  $500/9$  m
- (c) 1000m
- (d)  $500/3$  m

**Q10.** Both  $x$  and  $y$  vary directly with each other and when  $x$  is 10,  $y$  is 14, which of the following is not a possible pair of corresponding values of  $x$  and  $y$ ?

- (a) 25 and 35
- (b) 35 and 25
- (c) 35 and 49
- (d) 15 and 21