

Direct Variation

THEORY QUESTIONS

1. x is directly proportional to y . If $x = 5$ when $y = 3$, find y when $x = \frac{2}{7}$.

2. The wages of a labourer varies directly as the number of hours worked by the labourer. The labourer earned ₦500 when he worked for 2 hours. Find:
 - (i) the amount he would earn if he works for 7 hours.
 - (ii) the number of hours he would work if he is paid ₦800.

3. y varies directly as x . When $x = 8$, $y = 20$. Find the value of y when $x = 12$.

4. p is directly proportional to q . If $p = 18$ when $q = 6$, find q when $p = 27$.

5. The cost C of printing varies directly as the number of pages n . If it costs ₦450 to print 15 pages, find the cost of printing 40 pages.

6. y is directly proportional to the square of x . If $y = 45$ when $x = 3$, find y when $x = 5$.

7. The distance d covered by a car varies directly as the time t taken. If the car covers 180 km in 3 hours, find:
 - (i) the distance covered in 5 hours.
 - (ii) the time taken to cover 420 km.

8. m varies directly as n . If $m = \frac{4}{9}$ when $n = \frac{2}{3}$, find m when $n = 5$.

ANSWERS

1. $y = \frac{6}{35}$
2. (i) ₦1,750 (ii) 3.2 hours
3. $y = 30$
4. $q = 9$
5. $C = ₦1,200$
6. $y = 125$
7. (i) 300 km (ii) 7 hours
8. $m = \frac{10}{3}$