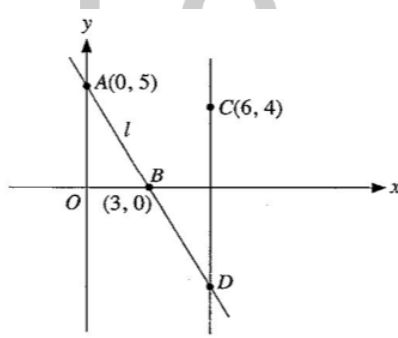


Must Know Questions To Ace Linear Functions & Graphs

1.	<p>Plot and label each set of the given points on a graph paper. Join the points in order with straight lines and identify the geometrical shapes obtained.</p> <p>a) $A(-2, 1), B(-6, -2), C(-4, -5), D(2, -5)$</p> <p>b) $E(-2, 4), F(0, 1), G(6, 5), H(4, 8)$</p>
2.	<p>Determine the gradient for each of the following equations.</p> <p>a) $y = 7x$</p> <p>b) $2y - 3x = 8$</p> <p>c) $y + 2 = 0$</p> <p>d) $x = 4$</p>
3.	<p>Given that the equation of the line is $3y - 4 = 2x$.</p> <p>a) Find the value of p and q if $(2, p)$ and $(q, 7)$ lie on a straight line.</p> <p>b) State the gradient and the y – intercept of the line.</p>
4.	<p>In the diagram, the coordinates of A, B and C are $(0, 5)$, $(3, 0)$ and $(6, 4)$ respectively. A and B lie on the line l. A vertical line passing through C cuts l at point D.</p> <p>a) Find the gradient and the y – intercept of the line l.</p> <p>b) Hence, find the coordinates of D.</p> 

5. The distance, y kilometres, of a train at time, x hours, from a fixed point P is given by $y = 15 + 40x$.

a) Copy and complete the table below.

x	0	5	10
y			

- b) Using a scale of 1 cm to represent 1 hour on the horizontal axis and 2 cm to represent 50 km on the vertical axis, draw the graph of $y = 15 + 40x$ for values $0 \leq x \leq 10$.
- c) Find the gradient of the graph.
- d) What does the gradient represent?

Answer Key:

1. a) Trapezium

b) Rectangle

2. a) 7

b) $\frac{3}{2}$

c) 0

d) Undefined

3. a) $p = \frac{8}{3}$

$q = \frac{17}{2}$

b) Gradient = $\frac{2}{3}$

y – intercept = $\frac{4}{3}$

4. a) Gradient = $-1\frac{2}{3}$

y – intercept = 5

b) D (6 , -5)

5. a)

x	0	5	10
y	15	215	415

b) Gradient = 40

c) The gradient represent the speed of the train in km/h.