

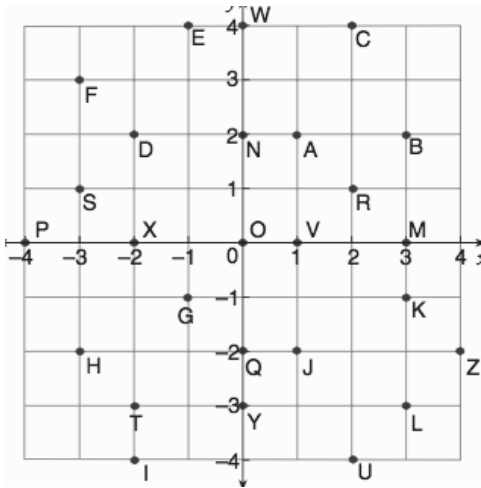


# Year 9 Mathematics

## Linear Relationships Practice Test 1

Name \_\_\_\_\_

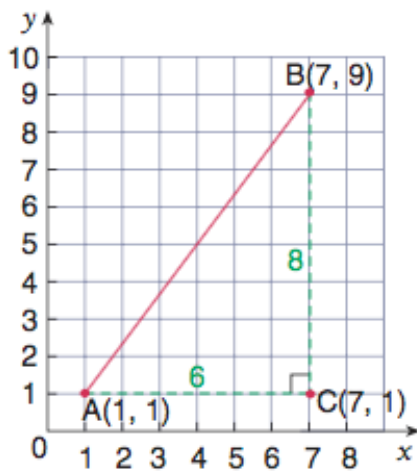
1 Write down the letter naming the points below



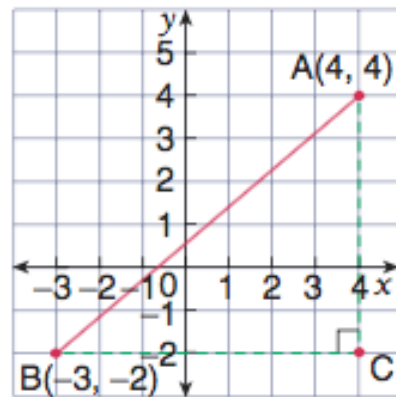
- a) (2, 1)
- b) (-4, 0)
- c) (-2, -3)
- d) (3, -3)

2 Find the length of the interval AB to 1 decimal place where necessary

a)



b)



3 Find the midpoint of the interval joining (2, 6) and (8, 10)

4 Find the midpoint of AB if A is the point (-3, 5) and B is (4, -2)

5  $y = 4x - 3$  Find the value of  $y$  if  $x = 2$

6 Do the values  $x = -1$  and  $y = 4$  make  $y = 7x + 3$  TRUE or FALSE

7 Find the equation linking  $x$  and  $y$  for the table

x	0	1	2	3
y	3	4	5	6

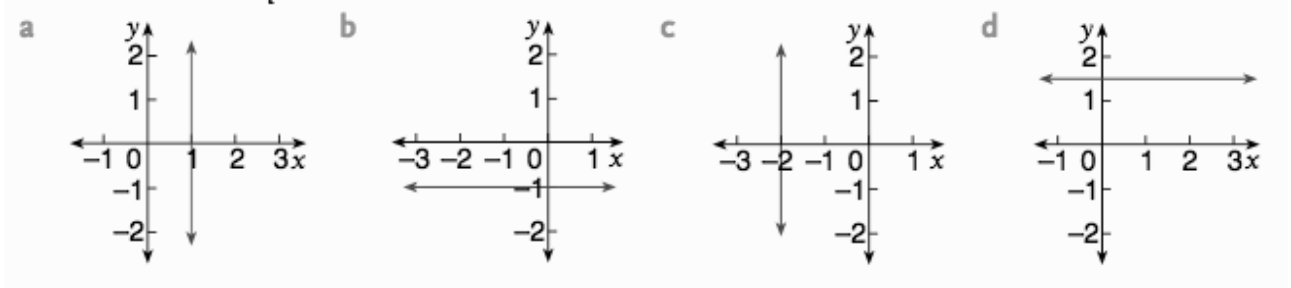
8 Draw the graph of each straight line

a)  $x + y = 5$

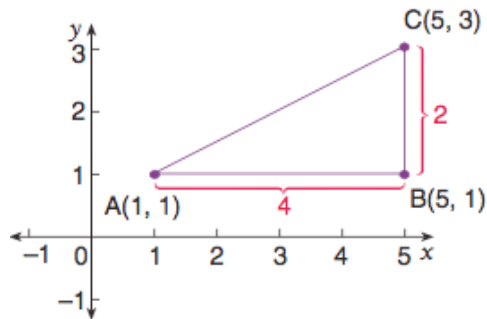
b)  $y = 3x - 2$

9 Does the point (6, 7) lie on the line  $y = 2x - 5$

10 Write down the equation of each line



11 Find the gradient of the line joining the points A and C



12 Find the gradient of the straight line passing through the points

a) (1, 3) and (4, 7)

b) (6, -2) and (2, 1)

13 What is the gradient and y intercept of the line  $y = 11x + 7$

14 Find the gradient and y-intercept of the line  $y = \frac{1}{3}x - 5$

15 Find the equation of the line which has a gradient of 4 and a y intercept of  $-2$

## ANSWERS

1 a) R    b) P    c) T    d) L

2 a) 10    b) 9.2

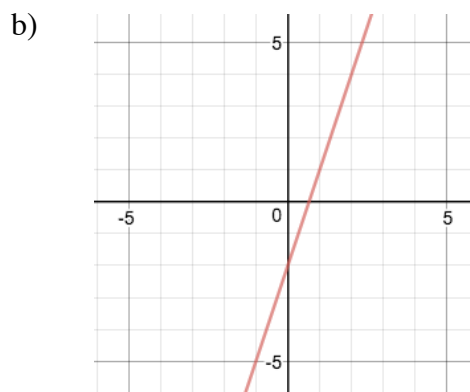
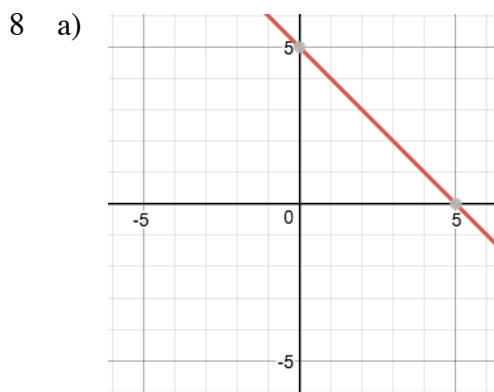
3 (5, 8)

4  $(\frac{1}{2}, 1\frac{1}{2})$

5  $y = 5$

6 False

7  $y = x + 3$



9 Does the point (6, 7) lie on the line  $y = 2x - 5$

$$\begin{aligned} \text{LHS} &= y \\ &= 7 \end{aligned}$$

$$\begin{aligned} \text{RHS} &= 2x - 5 \\ &= 2 \times 6 - 5 \\ &= 7 \end{aligned}$$

$$\text{LHS} = \text{RHS}$$

$\therefore$  The point lies on the line

10 a)  $x = 1$     b)  $y = -1$     c)  $x = -2$     d)  $y = 1\frac{1}{2}$

11  $m = \frac{1}{2}$

12 a)  $\frac{4}{3}$     b)  $\frac{-3}{4}$

13 Gradient is 11    y intercept (0, 7)

14 Gradient is  $\frac{1}{3}$     y intercept (0, -5)

15  $y = 4x - 2$