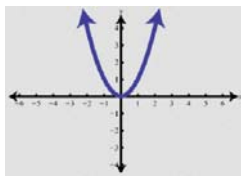
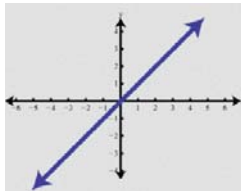
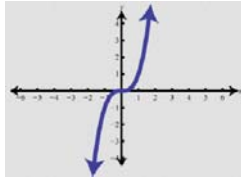


Linear Relationships TOPIC TEST

1. Which of the equations below represent linear relationships?

- (A) $y = 3x^2 \text{ } \emptyset 5$
 (B) $y = 3x \text{ } \emptyset 5$
 (C) $3x + y = 5$
 (D) $\frac{y}{3x} = 5$

2. Circle the non-linear relationships graphed below:



3. Write the linear relationship represented by each table of values:

(A) _____

| | | | | | |
|---|-----|----|----|---|---|
| x | -2 | -1 | 0 | 1 | 2 |
| y | -11 | -6 | -1 | 4 | 9 |

(B) _____

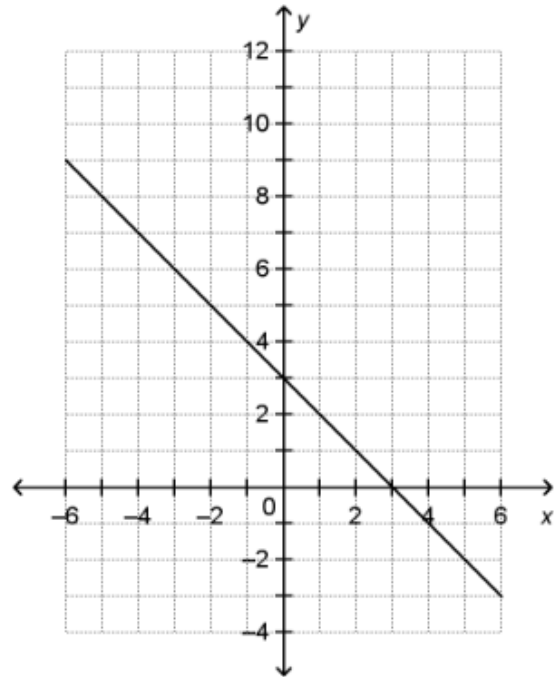
| | | | | | |
|---|----|----|----|----|----|
| x | -7 | -6 | -5 | -4 | -3 |
| y | 3 | 1 | -1 | -3 | -5 |

C) _____

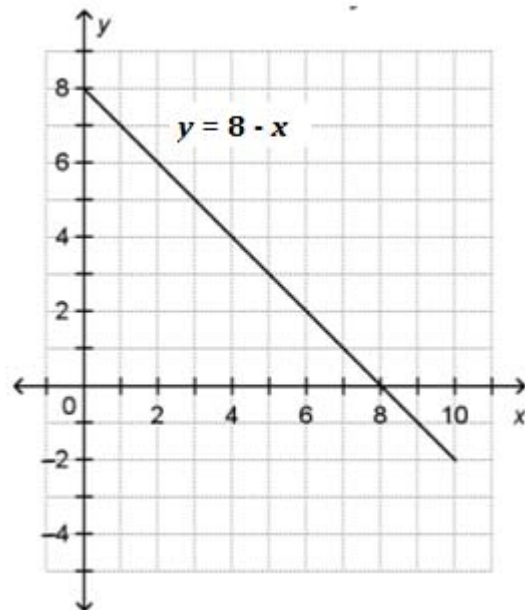
| | | | | | |
|---|----|---|----|----|----|
| x | -2 | 0 | 2 | 4 | 6 |
| y | 5 | 8 | 11 | 14 | 17 |

Mrs Manners (2016)

4. Find the equation of the line graphed below:



5. Use the graph of $y = 8 - x$ below to solve the following equations:



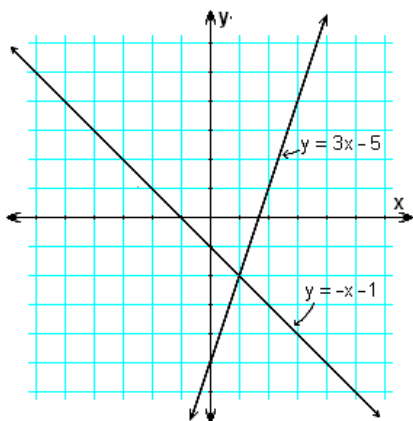
(A) $8 \text{ } \emptyset x = 7$

(B) $8 \text{ } \emptyset x = 3$

(C) $8 \text{ } \emptyset x = -1$

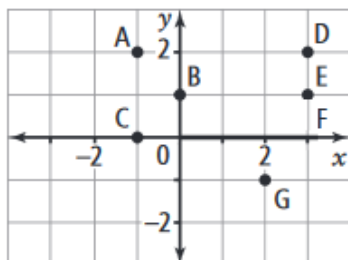
6. Does the point $(-2, -7)$ lie on the line $y = 1 \text{ } \emptyset 3x$?

7. Write down the point of intersection of the two lines below:



Point of intersection: _____

8. Write down the coordinates of each point plotted below:



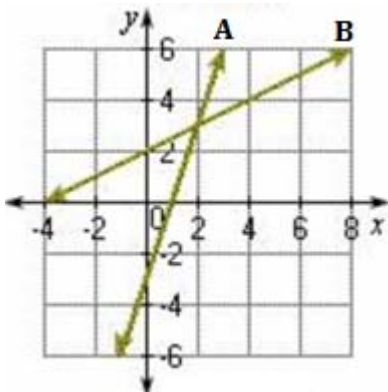
A = _____ B = _____

C = _____ D = _____

E = _____ F = _____

G = _____

9. Write down one similarity and one difference between line A and line B graphed below:



10

(A) Complete the table of values for the line $y = 4x - 3$ and $y = 3x + 1$.

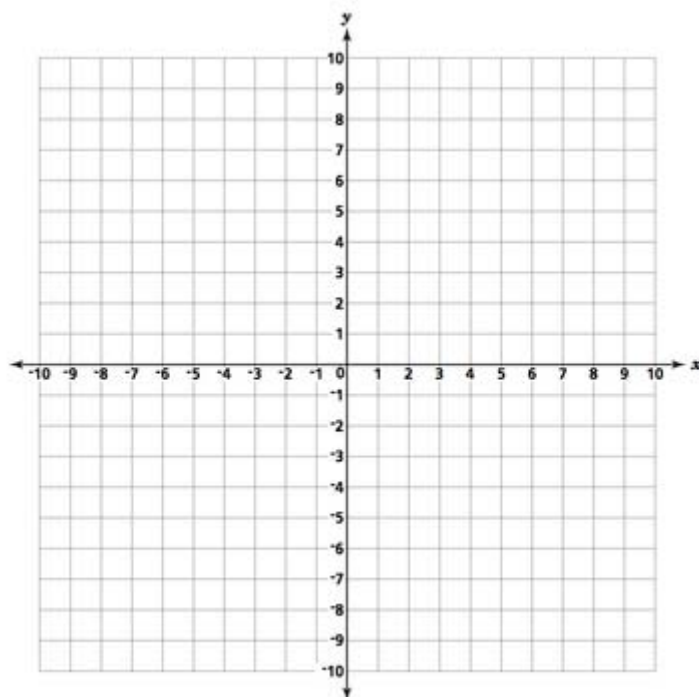
$y = 4x - 3$

| | | | | | |
|-----|----|----|---|---|---|
| x | -2 | -1 | 0 | 1 | 2 |
| y | | | | | |

$y = 3x + 1$

| | | | | | |
|-----|----|----|---|---|---|
| x | -2 | -1 | 0 | 1 | 2 |
| y | | | | | |

(B) Use your table of values to plot both points on the coordinate plane below.



(C) Write down the point of intersection of both lines.

11. CHALLENGE: The point $(m, -5)$ lies on the line $y = 4x + 11$. Find the value of m .