

Name:

Subject/s:

Teacher:

Topic number	Topic	Date of completion	Checked by teacher	How do you feel about the topic?
1.	Collecting Like terms.			
2.	Simplifying Expressions.			
3.	Expanding & Simplifying.			
4.	Solving equations (with missing numbers).			
5.	Solving equations.			
6.	Plotting coordinate points on a graph.			
7.	Reading and interpreting coordinates on a graph.			
8.	Linear equations- using rules to fill in tables.			
9.	Linear equations- using rules to plot points on a graph.			
10.	Reading & interpreting Distance/Time graphs.			

## Algebra

Collect the Like Terms in each expression:

1.  $q+q+q+q=$

2.  $x+x=$

3.  $3b-b=$

4.  $9r-8r+2=$

5.  $7m-5m-2n+3n=$

6.  $4a+5b+6a+4b+2b=$

7.  $5c \times 2=$

8.  $3d \times 3=$

Simplify the following expressions:

1.  $c + 4c$

2.  $9k - 6k$

3.  $5p \times 6p$

4.  $2t \times t$

5.  $2x + 4x$

6.  $9s + 3s$

**Expand and simplify the following expressions:**

1.  $2(f + 3)$

2.  $x(x - 5)$

3.  $4(b + 5)$

4.  $4(y - 2) + 5(y + 3)$

5.  $2(g + 6) - 7(g - 3)$

**Fill in the missing box:**

1.  $12 \times \square = 48$

2.  $36 \div \square = 6$

3.  $16 + 6 = \square$

4.  $35 - 10 = \square$

**Solve these equations: You must show your working.**

1.  $4x = 15$

2.  $3x = 8$

3.  $3x = 12$

4.  $6x = 9$

**5.**  $7x = -4$

**6.**  $-2x = 10$

**7.**  $5x - 4 = 11$

**8.**  $10x - 11 = 39$

**9.**  $2x + 1 = 8$

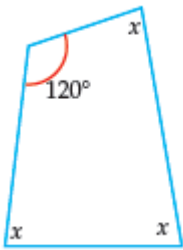
**10.**  $5x + 7 = 3$

**11.**  $3x + 8 = 5x - 7$

**12.**  $5x = x + 32$

**13.** If 5 is subtracted from Mike's age twice the result is 11. Write an equation for this and use it to work out Mike's age.

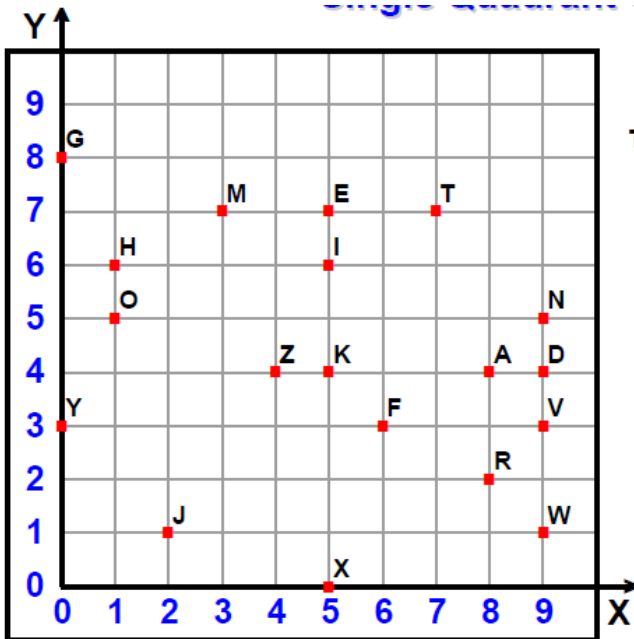
**14.** A quadrilateral has three equal angles; the fourth angle is 120 degrees



Write an equation to show the 4 angles add to 360 degrees and then solve the equation to work out the size of each equal angle.

# Tables, Equations & Graphs

1. Name the points:



Tell what point is located at each ordered pair.

- |                |                 |
|----------------|-----------------|
| 1) (9,5) _____ | 6) (9,1) _____  |
| 2) (1,5) _____ | 7) (9,3) _____  |
| 3) (6,3) _____ | 8) (5,0) _____  |
| 4) (5,6) _____ | 9) (1,6) _____  |
| 5) (2,1) _____ | 10) (8,4) _____ |

2. Using the graph above:

Write the ordered pair for each given point.

- |                    |                    |                    |
|--------------------|--------------------|--------------------|
| 11) <b>D</b> _____ | 14) <b>Y</b> _____ | 17) <b>T</b> _____ |
| 12) <b>K</b> _____ | 15) <b>G</b> _____ | 18) <b>Z</b> _____ |
| 13) <b>E</b> _____ | 16) <b>R</b> _____ | 19) <b>M</b> _____ |

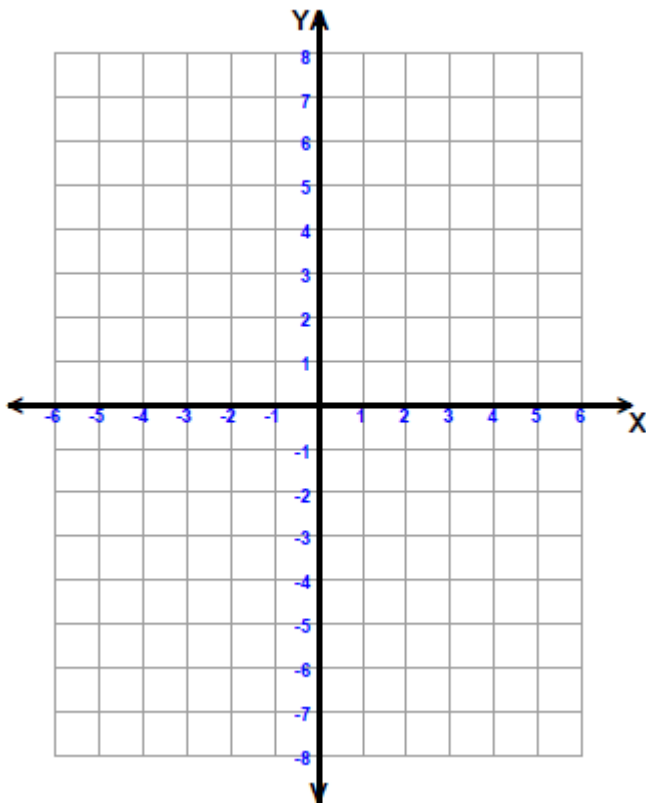
3. Using the graph above:

Plot the following points on the coordinate grid.

- |                    |                    |                    |
|--------------------|--------------------|--------------------|
| 20) <b>S</b> (8,3) | 22) <b>U</b> (6,0) | 24) <b>B</b> (4,1) |
| 21) <b>P</b> (0,0) | 23) <b>Q</b> (5,8) | 25) <b>L</b> (7,3) |

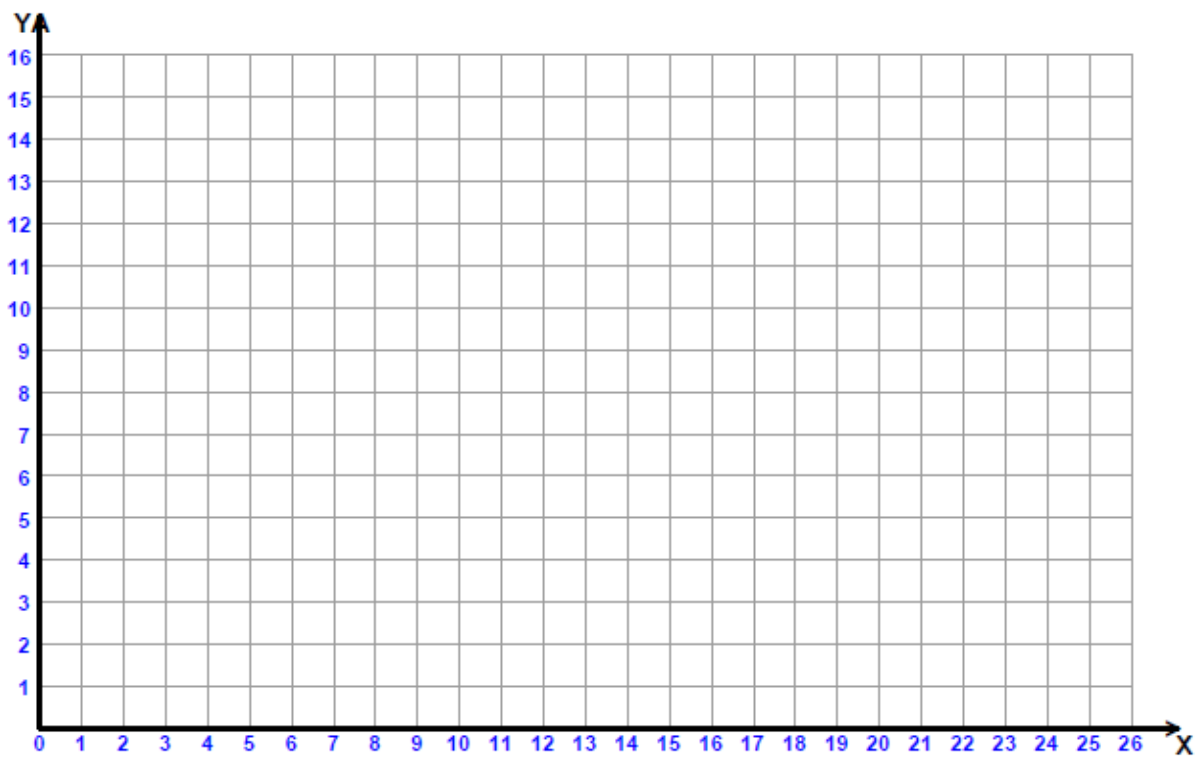
4. Using the table, plot the coordinates on the graph:

X	Y
3	9
2	6
1	3
0	0
-1	-3
-2	-6



5. Using the rule  $y = 3x + 1$  complete the table below and then plot the coordinates on a graph.

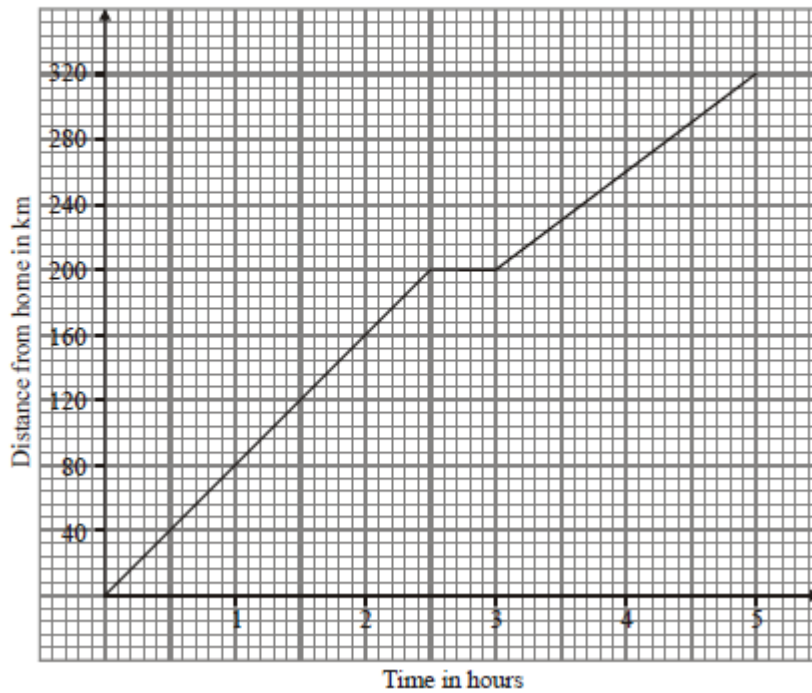
x	y
1	
2	
3	
4	
5	





## 6. Complete the following questions:

Jane drove 320 km from her home to the airport.  
The travel graph shows Jane's journey.



During the journey, Jane stopped for lunch.

(a) (i) For how long did Jane stop for lunch? .....

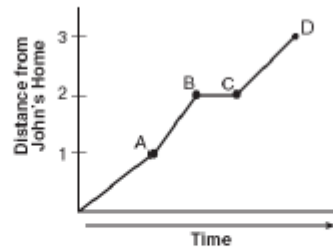
(ii) How far had Jane travelled in the first 90 minutes?

..... km

(b) Work out the steady speed that Jane travelled at after lunch.

..... km/h

2) John left his home and walked 3 blocks to his school, as shown in the accompanying graph.



What is one possible interpretation of the section of the graph from point *B* to point *C*?

- (1) John arrived at school and stayed throughout the day.
- (2) John waited before crossing a busy street.
- (3) John returned home to get his mathematics homework.
- (4) John reached the top of a hill and began walking on level ground.