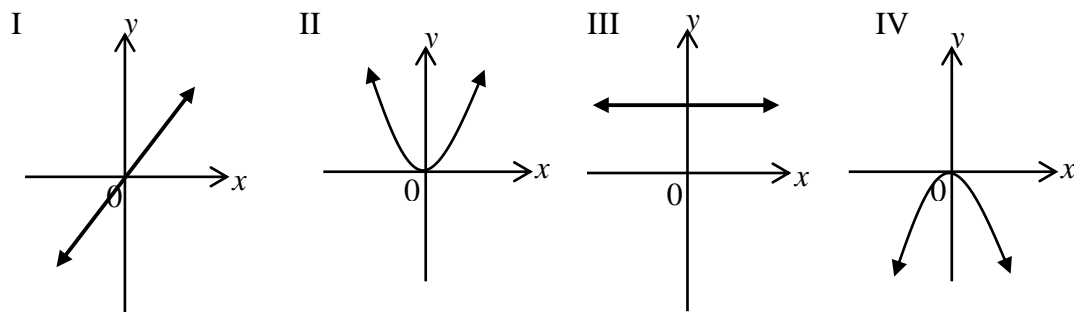# Year 10 Mathematics Worksheet 1

1. Define the following terms:

    (a)   relation

    (b)   function

2. From the following graphs, identify the linear and quadratic functions.

3. There are many properties of linear and quadratic functions. One property of each function is given in the table below. Give **two more** properties of each of the function.

Type of Function	
Linear	**Quadratic**
It has a straight line graph	It has a turning point(vertex)

4. Define the terms domain and range as used in a relation.

5. A relation is given as $\{(1,1), (2,4), (3,9), (4,16)\}$

    (a)   List the domain of the relation.

    (b)   List the range of the relation.

6. A relation is given as $y = 2 - x$ where $x \in \{-1, 0\}$

    (a)   Find the y-values for $x \in \{-1, 0\}$.

    (b)   List the **ordered** pairs of this relation.

7. An inequality is given as $y \geq 2x + 40$.

    (a)   Find the x-intercept and y-intercept of the equation $y = 2x + 40$

    (b)   Draw the graph of the inequality, $y \geq 2x + 40$ on a Cartesian plane.