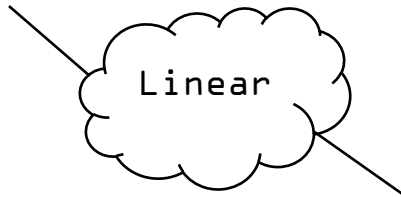


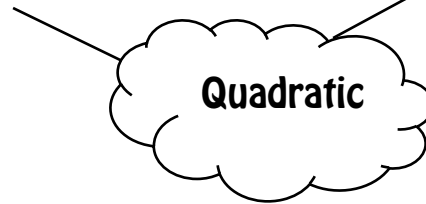
Identifying Graphs

1. Write down anything you can think about the following types of graphs:

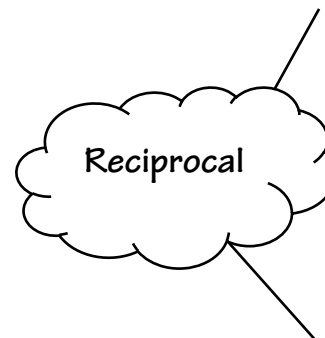
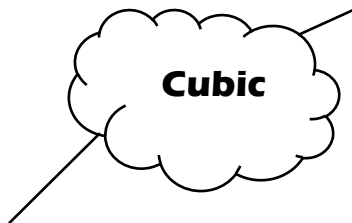
An example of a linear equation is:



The general shape is:



A negative reciprocal graph looks like:

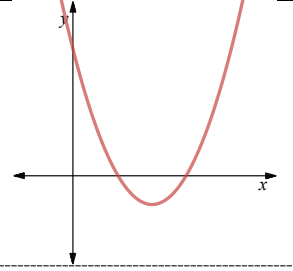
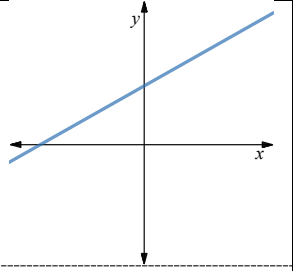
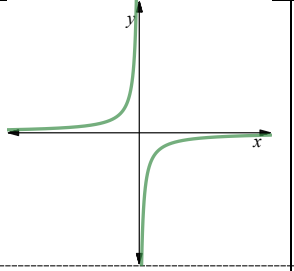
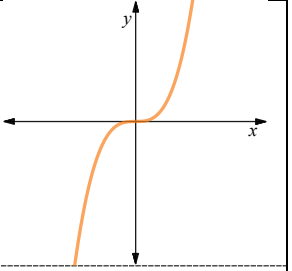


A cubic equation must contain...

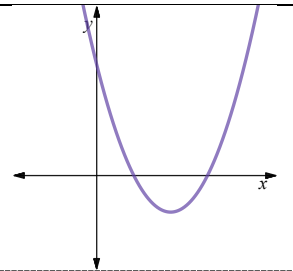
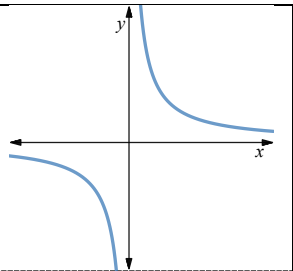
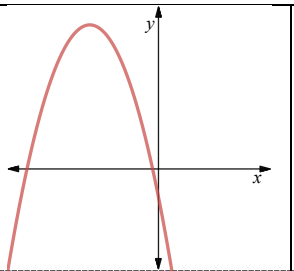
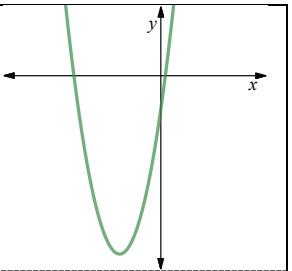
2. State whether each graph is linear, quadratic, cubic, reciprocal or none of the above.

a)	b)	c)	d)
e)	f)	g)	h)

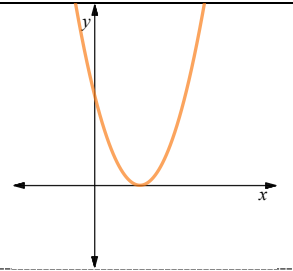
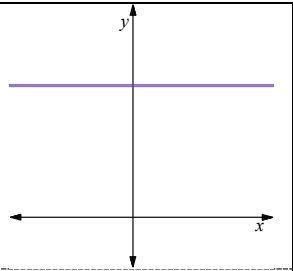
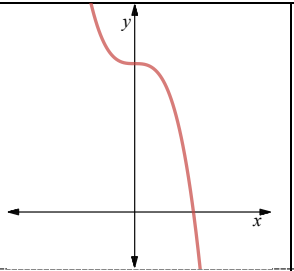
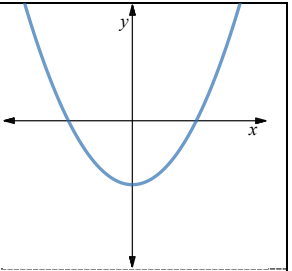
3. Match the graphs to the equations:

			
a)	b)	c)	d)
$y = -\frac{3}{x}$	$y = x^3$	$y = \frac{1}{2}x + 5$	$y = x^2 - 7x + 10$

4. Match the graphs to the equations:

			
a)	b)	c)	d)
$y = \frac{5}{x}$	$y = -x^2 - 5x - 1$	$y = x^2 - 4x + 3$	$y = x^2 + 7x - 3$

5. Match the graphs to the equations:

			
a)	b)	c)	d)
$y = 4 - x^3$	$y = (x - 1)^2$	$y = (x + 1)(x - 1)$	$y = 4$

6. Group the following equations and give a reason for your grouping:

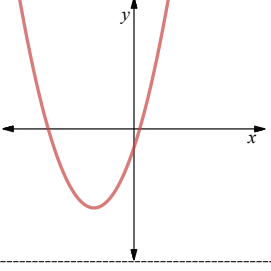
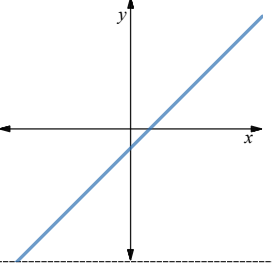
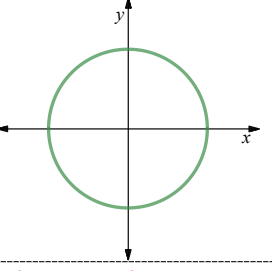
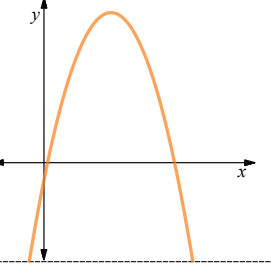
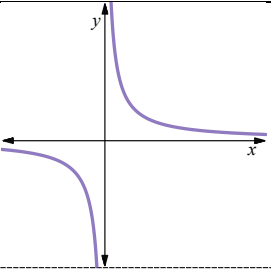
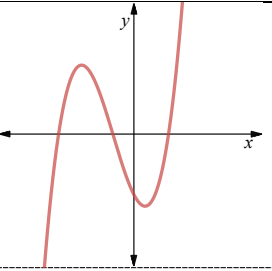
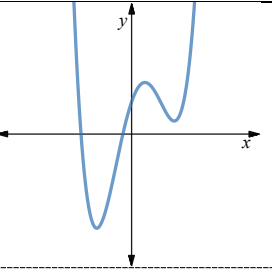
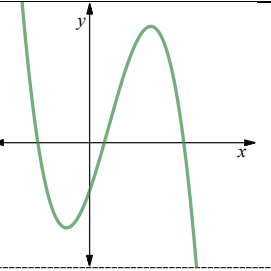
$y = x^2 + 3$	$y = x^3 - 2x - 1$	$y = 5x - 4$	$y = 7 - x^2$
$y = -x^3$	$y = 9 - 13x$	$y = \frac{3}{x}$	$y = (x - 3)^2$

Identifying Graphs Answers

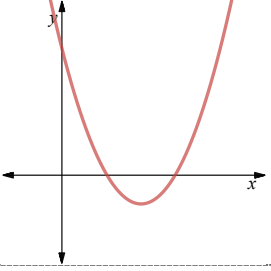
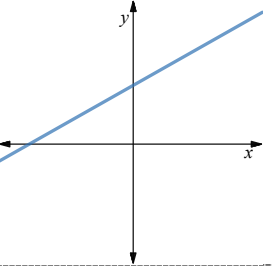
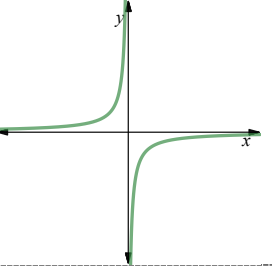
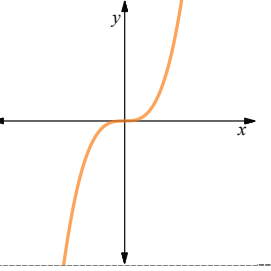
1. Write down anything you can think about the following types of graphs:

They can use their answers as a basis. Ideally, they drew some general shapes, talking about what must happen to the x-term for it to happen, key features, etc.

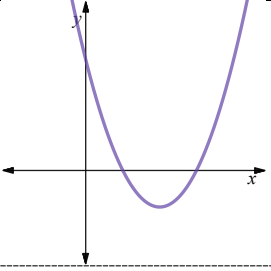
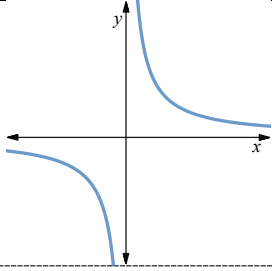
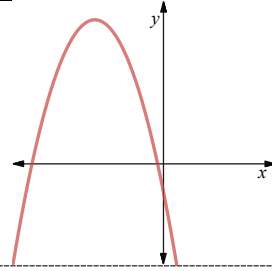
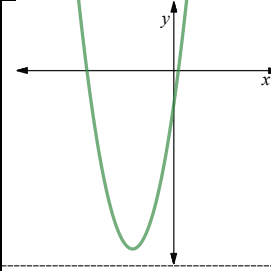
2. State whether each graph is linear, quadratic, cubic, reciprocal or none of the above.

			
a) Quadratic	b) Linear	c) None of the above	d) Quadratic
			
e) Reciprocal	f) Cubic	g) None of the above	h) Cubic

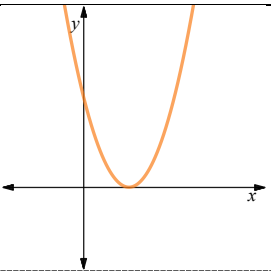
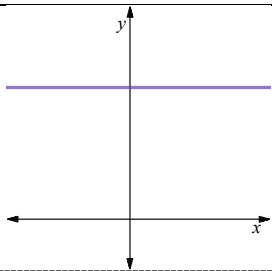
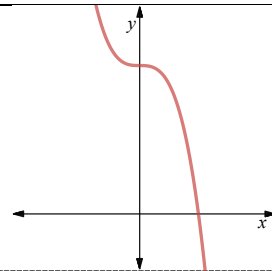
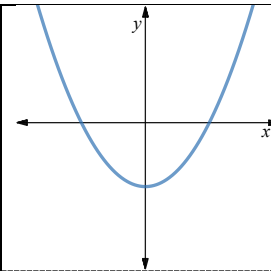
3. Match the graphs to the equations:

			
a) $y = x^2 - 7x + 10$	b) $y = \frac{1}{2}x + 5$	c) $y = -\frac{3}{x}$	d) $y = x^3$
$y = -\frac{3}{x}$	$y = x^3$	$y = \frac{1}{2}x + 5$	$y = x^2 - 7x + 10$

4. Match the graphs to the equations:

			
a) $y = x^2 - 4x + 3$	b) $y = \frac{5}{x}$	c) $y = -x^2 - 5x - 1$	d) $y = x^2 + 7x - 3$
$y = \frac{5}{x}$	$y = -x^2 - 5x - 1$	$y = x^2 - 4x + 3$	$y = x^2 + 7x - 3$

5. Match the graphs to the equations:

			
a) $y = (x - 1)^2$	b) $y = 4$	c) $y = 4 - x^3$	d) $y = (x + 1)(x - 1)$
$y = 4 - x^3$	$y = (x - 1)^2$	$y = (x + 1)(x - 1)$	$y = 4$

6. Group the following equations and give a reason for your grouping:

$y = x^2 + 3$	$y = x^3 - 2x - 1$	$y = 5x - 4$	$y = 7 - x^2$
$y = -x^3$	$y = 9 - 13x$	$y = \frac{3}{x}$	$y = (x - 3)^2$

Some example groups.

Linear	Quadratic	Cubic	Reciprocal
$y = 5x - 4$	$y = x^2 + 3$	$y = x^3 - 2x - 1$	$y = \frac{3}{x}$
$y = 9 - 13x$	$y = 7 - x^2$	$y = -x^3$	
	$y = (x - 3)^2$		

Positive	Negative
$y = x^2 + 3$	$y = 7 - x^2$
$y = x^3 - 2x - 1$	$y = -x^3$
$y = 5x - 4$	$y = 9 - 13x$
$y = \frac{3}{x}$	
$y = (x - 3)^2$	

Other groups include talking about the y-intercepts (i.e. >0 , $=0$, <0 or N/A) or anything else than can justify with their reasoning.