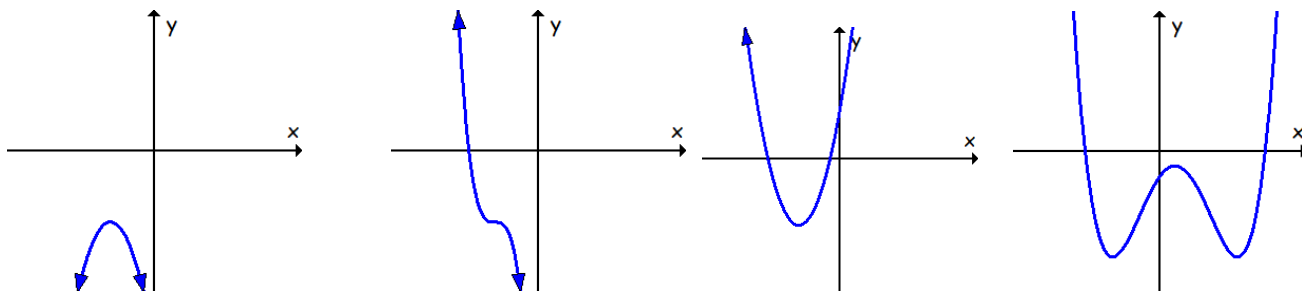


Finding complex roots

Check for understanding:

Which will have complex roots:

**Practice: B-Level**

Find the roots for each equation below using the Quadratic Formula then write in factored form.

1) $y = x^2 - 8x + 20$

$$x = \frac{-(\quad) \pm \sqrt{(\quad)^2 - 4(\quad)(\quad)}}{2(\quad)}$$

2) $y = x^2 + 10x + 26$

$$x = \frac{-(\quad) \pm \sqrt{(\quad)^2 - 4(\quad)(\quad)}}{2(\quad)}$$

3) $y = 3x^2 + 7x - 6$

$$x = \frac{-(\quad) \pm \sqrt{(\quad)^2 - 4(\quad)(\quad)}}{2(\quad)}$$

4) Rewrite in standard form:

$$Y = (x - 3i)(x - 3i)$$

Practice: B-Level Rewrite in factored form;

5) $y = x^3 - 3x^2 + 3x - 2$ has a real root at (2,0)

-2			
x			

6) $x^3 + 3x^2 + x - 5$ has a real root at (1,0)

7) $y = 2x^3 + x^2 - 19x + 36$ has a real root at (-4,0)

8) Rewrite in standard form:

$$y = (x+4)(x-(2+3i))(x-(2-3i))$$