

# Must Know Questions To Ace Quadratic & Fractional Equations

1.	<p>a) Express <math>x^2 - 7x + 12</math> in the form <math>(x - a)^2 + b</math>.</p> <p>b) Hence, solve <math>x^2 - 7x + 12 = 0</math>.</p>
2.	Express $7x - 2x^2 + 5$ in the form $(x - a)^2 + b$ .
3.	Solve $5x^2 - x - 2 = 0$ by using the quadratic formula, giving your answers correct to 2 decimal places.
4.	<p>Solve the following equation, giving your answers correct to 2 decimal places.</p> $\frac{5}{2x - 4} - \frac{x^2 + 1}{x - 2} = \frac{3}{2}$
5.	Sketch the graph of $y = (x - 4)(x + 3)$ , indicating the $x$ – intercept, $y$ – intercept, line of symmetry and the turning point.
6.	Sketch the graph of $y = (x + 2)^2 + 1$ , indicating the $x$ – intercept, $y$ – intercept, line of symmetry and the turning point.

**Answer Key:**

1. a)  $(x - 3.5)^2 - \frac{1}{4}$

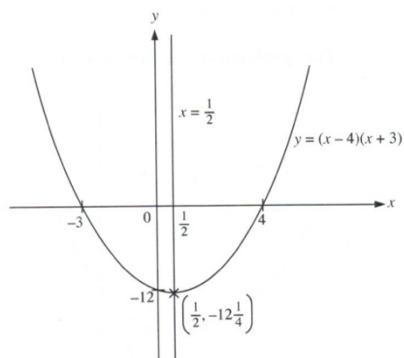
b)  $x = 4$  or  $x = 3$

2.  $-2(x - \frac{7}{4})^2 + \frac{89}{8}$

3.  $x = 0.74$  or  $x = -0.54$

4.  $x = 1\frac{1}{2}$  or  $x = -3$

5.



6.

