

Question:

Solve the following equation:

$$x^2 = 4x$$

Question:

Solve the following equation:

$$x^2 - x - 6 = 0$$

Question:

Solve the following equation:

$$(x - 7)^2 = 36$$

Question:

Complete the square for the expression:

$$x^2 - 6x$$

Question:

Complete the square for the expression:

$$3x^2 - 24x$$

Question:

Complete the square for the expression:

$$3x^2 - x$$

Question:

Solve the quadratic equation by completing the square (remember to leave your answer in surd form):

$$x^2 - 10x = 5$$

Question:

Solve the quadratic equation by completing the square (remember to leave your answer in surd form):

$$4x^2 - x = 8$$

Question:

Solve the following quadratic equation by using the formula, giving the solution in surd form. Simplify your answer:

$$3x^2 + 10x - 2 = 0$$

Question:

Solve the following quadratic equation by using the formula, giving the solution in surd form. Simplify your answer:

$$11x^2 + 2x - 7 = 0$$

Question:

Find the values of k for which $x^2 + kx + 4 = 0$ has equal roots.

Question:

Sketch graphs of the following equations:

(a) $y = x^2 + 5x + 4$

(b) $y = 2x^2 + x - 3$

(c) $y = 6 - 10x - 4x^2$

(d) $y = 15x - 2x^2$

Given that for all values of x :

$$3x^2 + 12x + 5 = p(x + q)^2 + r$$

- (a) Find the values of p , q and r .
- (b) Solve the equation $3x^2 + 12x + 5 = 0$.
- (c) Sketch the function $3x^2 + 12x + 5$