Solving Quadratics Using the Formula

Solve these quadratic equations, giving your answers to 2 decimal places.

(a) $x^2 + 5x + 1 = 0$

(b) $x^2 - 5x + 1 = 0$

(c) $2x^2 + 5x + 1 = 0$

(d) $2x^2 - 7x - 6 = 0$

(e) $4x^2 + x - 6 = 0$

(f) $4x^2 + 9x - 2 = 0$

(a) $x = -0.21, x = -4.79$

(b) $x = 4.79, x = 0.21$

(c) $x = -0.22, x = -2.28$

(d) $x = 4.21, x = -0.71$

(e) $x = 1.11, x = -1.36$

(f) $x = 0.20, x = -2.45$

Solve these quadratic equations, giving your answers to 2 decimal places.

(a) $2x^2 = 5x + 6$

(b) $x^2 + 7x = 2$

(c) $5x^2 = 11x + 3$

(d) $2x^2 = 3 - 5x$

(a) $x = 3.39, x = -0.89$

(b) $x = 0.27, x = -7.27$

(c) $x = 2.45, x = -0.25$

(d) $x = 0.5, x = -3$

Solve these quadratic equations, leaving your answers in surd form.

(a) $4x^2 - 9x + 4 = 0$

(b) $7x^2 + 3x = 2$

(c) $x^2 + 3x - 6 = 0$

(d) $7x^2 + 12x + 2 = 0$

(a) $\frac{9 \pm \sqrt{17}}{8} = x$

(b) $\frac{-3 \pm \sqrt{65}}{14} = x$

(c) $x = \frac{-3 \pm \sqrt{33}}{2}$

(d) $x = \frac{-6 \pm \sqrt{22}}{7}$

(a) The answers to a quadratic equation are $x = \frac{3 \pm \sqrt{37}}{2}$.

What is the quadratic equation?

(b) Solve the equation

$$x + \frac{3}{x} = 7$$

Give your answers correct to 2 decimal places.

(c) What is special about the solutions to the equation

$$4x^2 - 4x + 1 = 0$$

(a) $x^2 - 3x - 7 = 0$

(b) $x^2 + 3 = 7x$

$x^2 - 7x + 3 = 0$

$x = 6.54, x = 0.46$

(c) They are both the same

$x = \frac{1}{2}$

(repeated roots)