Solve Quadratics

Solve the following equations. Show your work.

a) $7x^2 + 2x = 0$

b) $7x^2 + 2x - 5 = 0$

c) $b^2 + 5b - 35 = 3b$

d) $6r^2 - 12r = 1$

e) $2x^2 + 11x = x^2 - x - 32$

e) $(x-5)(x-6) = 2$

Solve Quadratics

Solve the following equations. Show your work.

a) $7x^2 + 2x = 0$

$$x(7x + 2) = 0$$
$$x = 0 \text{ or } -\frac{2}{7}$$

b) $7x^2 + 2x - 5 = 0$

$$(7x - 5)(x + 1) = 0$$
$$x = \frac{5}{7} \text{ or } -1$$

c) $b^2 + 5b - 35 = 3b$

$$b^2 + 2b - 35 = 0$$
$$(b + 7)(b - 5) = 0$$
$$b = -7 \text{ or } 5$$

d) $6r^2 - 12r = 1$

$$6r^2 - 12r - 18 = 0$$
$$6(r - 3)(r + 1) = 0$$
$$r = 3 \text{ or } -1$$

e) $2x^2 + 11x = x^2 - x - 32$

$$x^2 + 12x + 32 = 0$$
$$(x + 8)(x + 4) = 0$$
$$x = -8 \text{ or } -4$$

e) $(x - 5)(x - 6) = 2$

$$x^2 - 11x + 30 = 2$$
$$x^2 - 11x + 28 = 0$$
$$(x - 7)(x - 4) = 0$$
$$x = 7 \text{ or } 4$$