Solve each Quadratic Equation by any method but you must use factoring at least once. Round to the nearest hundredth as necessary.

1. $x^2 - 5x = -14$

2. $x^2 + 12x = -30$

3. $x^2 + 9x - 36 = 0$

4. $3x^2 - 18x = 0$

5. $3(x - 5)^2 - 12 = 0$

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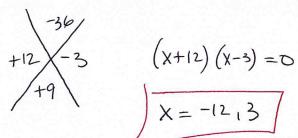
1. $x^2 - 5x = -14$

$+14 \quad +14$

$x^2 - 5x + 14 = 0$

$b^2 - 4ac = -31$

No Real
solution

2. $x^2 + 12x = -30$

$+30 \quad +30$

$x^2 + 12x + 30 = 0$

$b^2 - 4ac = 24$

$x = \dfrac{-12 \pm \sqrt{24}}{2}$

$x = -8.45 , -3.55$

3. $x^2 + 9x - 36 = 0$

-36
$+12 \quad -3$
$+9$

$(x+12)(x-3) = 0$

$x = -12, 3$

4. $3x^2 - 18x = 0$

$3x(x-6) = 0$

$x = 0, 6$

5. $3(x-5)^2 - 12 = 0$

$+12 \quad +12$

$\dfrac{3(x-5)^2}{3} = \dfrac{12}{3}$

$\sqrt{(x-5)^2} = \sqrt{4}$

$x - 5 = \pm 2 \quad +5$

$+5$

$x = \begin{array}{l} +2 +5 = 7 \\ -2 +5 = 3 \end{array}$

$x = 3, 7$