Bellwork Hon Alg 2 Friday, November 11, 2016

Solve each quadratic equation by either factoring or using square roots. Give exact answers when using square roots.

1. $12x^2 - 90 = 42x$

2. $2x^2 + 3 = 27$

3. $8x^2 - 98x = 0$

4. $5(x+6)^2 - 7 = 173$

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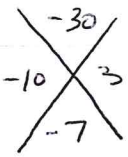
1. $12x^2 - 90 = 42x$

$12x^2 - 42x - 90 = 0$

$6(2x^2 - 7x - 15) = 0$



	x	-5
2x	$2x^2$	-10x
+3	+3x	-15

$6(x-5)(2x+3) = 0$

$x = -3/2, 5$

2. $2x^2 + 3 = 27$

$-3 \quad -3$

$\frac{2x^2}{2} = \frac{24}{2}$

$\sqrt{x^2} = \sqrt{12}$

$x = \pm\sqrt{12} = \pm\sqrt{4 \cdot 3}$

$x = \pm 2\sqrt{3}$

3. $8x^2 - 98x = 0$

$2x(4x - 49) = 0$

$x = 0, \frac{49}{4}$

4. $5(x+6)^2 - 7 = 173$

$+7 \quad +7$

$\frac{5(x+6)^2}{5} = \frac{180}{5}$

$\sqrt{(x+6)^2} = \sqrt{36}$

$x + 6 = \pm 6$

$+6 \quad -6$

$-6 \quad -6$

$x = 0, -12$