Algebra 1 Bellwork Thursday, May 26, 2016

Solve each quadratic equation by factoring.

Remember to follow these steps:

- a. Rewrite equation so that is has this form: $ax^2 + bx + c = 0$
- b. Factor completely.
- c. Find the zeros of each factor.

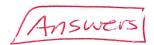
1.
$$16x^3 + 36x^2 = 10x$$

2.
$$-54x = -3x^2 - 243$$

3.
$$3x^3 - 2x^2 + 32 = 48x$$

4.
$$42x^2 + 24x = 0$$

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1.
$$16x^{3} + 36x^{2} = 10x$$

$$16x^{3} + 36x^{2} - 10x = 0$$

$$2x (8x^{2} + 18x - 5) = 0$$

$$2x (4x - 1)(2x + 5) = 0$$

$$x = 0$$

$$x = 0$$

$$3. \ 3x^3 - 2x^2 + 32 = 48x$$

$$3x^{3} - 2x^{2} - 48x + 32 = 0$$

$$3x - 2$$

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$$3x - 2$$

$$(3x - 2)(x^{2} - 16) = 0$$

$$(3x - 2)(x \pm 4) = 0$$

$$-16 - 48x + 32$$

$$7x = \frac{7}{3}, \pm 4$$

2.
$$-54x = -3x^{2} - 243$$

 $3x^{2} - 54x + 243 = 0$
 $3(x^{2} - 18x + 81) = 0$
 $3(x - 9)^{2} = 0$ $x = 9$

4.
$$42x^{2} + 24x = 0$$

$$6x (7x + 4) = 0$$

$$X = 0, -\frac{4}{7}$$