PRE-CALCULUS 11 QUADRATIC EQUATIONS SOLVING QUADRATIC EQUATIONS BY FACTORING PART 2

A. Definitions

- 1. factor: terms or expressions that when multiplied form a product.
- 2. **quadratic equation:** an equation that can be written in the form: $ax^2 + bx + c = 0$. Where a,b and c are constants and $a \neq 0$. Quadratic equations usually have 2 answers.

B. Solving Quadratic Equations

Solve the following equations. You do not need to provide a check.

1)
$$x^{2}-2x-11=4$$
 $x^{2}-2x-15=0$
 $(x-5)(x+3)=0$
 $x^{2}-3x-15=0$
 $x^{2}-3x-15=0$
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2)
$$2x^{2}-5x-9 = x^{2}+3x$$

 $-x^{2}-3x$ $-x^{2}+3x$
 $-x^{2}-3x$ $-x^{2}+3x$
 $(x^{2}-8x-9 = 0)$
 $(x-9)(x+1)=0$
 $(x-9)(x+1)=0$
 $(x-9)(x+1)=0$

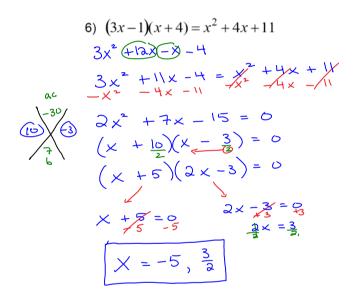
5)
$$8x^{2} - 3x + 4 = 2x^{2} + 2x + 3$$

$$6 \times 2 - 5x + 1 = 0$$

$$6 \times 2 - 5x + 1 = 0$$

$$3 \times (2x - 1) - 1(2x - 1) = 0$$

$$3 \times -1 = 0$$



Assignment: Solving Quadratic Equations by Factoring Assignment #1 – 14

PRE-CALCULUS 11 QUADRATIC EQUATIONS SOLVING QUADRATIC EQUATIONS BY FACTORING ASSIGNMENT

A. Solve the following equations. You do not need to provide a check.

1)
$$x^2 + 5x + 6 = 0$$

2)
$$x^2 - 16 = 0$$

3)
$$x^2 - 6x - 16 = 0$$

4)
$$4x^2 - 7x + 3 = 0$$

5)
$$2x^2 + 3x + 1 = 0$$

6)
$$3x^2 - 108 = 0$$

7)
$$4x^2 - 16x + 15 = 0$$

8)
$$x^2 - 5x - 30 = 6$$

9)
$$3x^2 - 4x - 20 = x^2 + 2x$$

10)
$$4x^2 + 4x + 3 = 3x^2 - 4x - 4$$

11)
$$2x^2 + 3x = 2 - 2x - x^2$$

12)
$$6x^2 + 10x + 2 = 2x^2 + 2x - 1$$

13)
$$(x+2)(x-2)=-1-2x$$

14)
$$7x(x+1)-3x=(x+2)(x+1)$$

<u>Answers</u>

1)
$$x = -2, -3$$
 2) $x = \pm 4$

2)
$$x = \pm 4$$

3)
$$x = 8,-1$$

3)
$$x = 8,-2$$
 4) $x = 1,\frac{3}{4}$

5)
$$x = -1, -\frac{1}{2}$$

6)
$$x = \pm 6$$

7)
$$x = \frac{3}{2}, \frac{5}{2}$$
 8) $x = 9, -4$

8)
$$x = 9,-4$$

9)
$$x = 5, -2$$

9)
$$x = 5,-2$$
 10) $x = -1,-7$

11)
$$x = -2, \frac{1}{3}$$

11)
$$x = -2, \frac{1}{3}$$
 12) $x = -\frac{1}{2}, -\frac{3}{2}$

13)
$$x = 1, -3$$

13)
$$x = 1,-3$$
 14) $x = \frac{1}{2}, -\frac{2}{3}$