

Review: Simplify

1. $(-3 - 7i) - (-5 - 4i)$	2. $(-2 - 6i) + 8 + (4i)$
3. $-3\sqrt{3} + 3\sqrt{3}$	4. $-3\sqrt{6} - \sqrt{6}$
5. $(3i)(-6 - 3i)$	6. $(-2 - 2i)^2$
7. $\sqrt{15}(5\sqrt{6} + 3)$	8. $(-2\sqrt{3} + 3)(3\sqrt{3} - 5)$

Is this a perfect square trinomial? How do you know? Factor the trinomial.

$$x^2 - 20x + 100$$

Ex 1. Solve the equation by COMPLETING THE SQUARE.

a)  $x^2 - 10x + 7 = 0$

Step One:

Step Four:

Step Two:

Step Three:

b)  $7x^2 + 28x + 56 = 0$

What makes this equation a little different from the one in part a?

Step One:

Step Two:

Step Three:

Step Four:

Step Five:

Solve the equation by COMPLETING THE SQUARE.

1.  $x^2 + 2x - 6 = 0$

2.  $x^2 - 8x - 5 = 0$

3.  $x^2 + 8x = -20$

4.  $6x^2 + 6x + 12 = 0$

5.  $4x(x - 3) = 24$

6.  $3x^2 + 8x = 2x - 9$

7. Describe and correct the error in finding the value of  $c$  that makes the expression a perfect square trinomial.

$$x^2 + 30x + c$$

$$x^2 + 30x + \frac{30}{2}$$

$$x^2 + 30x + 15$$

8. Describe and correct the error in solving the equation.

$$4x^2 + 24x - 11 = 0$$

$$4(x^2 + 6x) = 11$$

$$4(x^2 + 6x + 9) = 11 + 9$$

$$4(x + 3)^2 = 20$$

$$(x + 3)^2 = 5$$

$$x + 3 = \pm\sqrt{5}$$

$$x = -3 \pm \sqrt{5}$$