Complex Roots and Radical

Name: _____   Date: _____   Period: ____

State the type of root and how many for the following equations.

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

2. $-2x^2 - 8x - 14 = -6$

Find the x-intercepts for the following equations by using quadratic formula.

3. $x^2 - 8x + 15 = 0$

4. $3x^2 + 5x = 2$

5. The principal at a high school is planning a concert to raise money for the music programs. He determines the profit p from ticket sales depends on the price t of a ticket according to the equation $p = -200t^2 + 3600t - 6400$. All amounts are in dollars. If the goal is to raise $8500, what is the smallest amount the school should charge for a ticket to the concert?

6. Create two non perfect square root expression and simplify it. (i.e. $\sqrt{12} = \sqrt{4 * 3} = \sqrt{4} * \sqrt{3} = 2 * \sqrt{3}$)