Algebra 1 Homework – 8-7 and 8-8

Name:_____ **Date:**_____ **Block:**_____

1) Carter plans to wallpaper the longest wall in his living room. The wall is twice as long as it is high and has an area of 162 square feet. What is the height of the wall?

2) An apple drops off the apple tree from a height of 8 feet. How long does it take the apple to reach the ground? Use the equation $y = -16x^2 + 8$. Round to the nearest tenth of a second.

3) The height of a skydiver jumping out of an airplane is given by $h = -16t^2 + 3200$. How long will it take the skydiver to reach the ground? Round to the nearest tenth of a second.

4) The height of a triangle is twice the length of its base. The area of the triangle is 50 m^2. Find the height and base to the nearest tenth of a meter.

Solve. Answer in simplest radical form.

5) $5x^2 = 40$

6) $0 = x^2 + 76$

7) $x^2 + 6 = 24$

Solve. Answer in simplest radical form.

8) $x^2 = 50$

9) $x^2 + 8 = 20$

Solve each equation by completing the square.

10) $x^2 - 8x + 13 = 0$

11) $x^2 + 6x + 34 = 0$

12) $x^2 + 8x + 11 = 0$

13) $x^2 + 2x - 6 = 0$