**Assignment: Solving Quadratic Equations by Factoring**

Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Date \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Period \_\_\_\_\_\_\_\_

**Solve. Show Work!**

1. 8.

2. 9.

3. 10.

4. 11.

5. 12.

6. 13.

7. 14.

15. A bicyclist is riding at a speed of 18 mi/h when she starts down a long hill. The distance *d* she travels in feet can be modeled by , where *t* is the time in seconds. How long will it take her to reach the bottom of a 400-foot-long hill?

16. The area of a rectangle is 27 in2. The length of the rectangle is 6 inches more than the width. Find the dimensions of the rectangle.

17. The base of a triangle is 4 inches longer than twice its height. If the triangle has an area of 24 in2, what is the height?

18. Members of the science club launch a model rocket from ground level with a starting velocity of 96 ft/s. After how many seconds will the rocket have an altitude of 128 feet? Use the formula

19. The cost of a pizza with “the works” is given as a function of its diameter. The relationship is where  is the cost, in cents, and *d* is the diameter of the pizza, in centimeters. If the pizza costs $12.00, then what is a reasonable estimate for the diameter of the pizza?

F 29 cm G 15 cm H 10 cm J 43.5 cm