HW 85 More Practice Name:_____

1. Sketch a graph of a quadratic equation with one x-intercept and only positive y-values.

2. Sketch a graph of a parabola with a vertex in the 3rd quadrant and no x-intercepts

3. Sketch a graph of a quadratic with a vertex in the 3rd quadrant and two x-intercepts

4. Sketch a graph of a parabola with a vertex on the y-axis, two x-intercepts and opens upward

Solve for x

5. $x^2 = 21$

6. $x^2 - 50 = -1$

7. $(x+1)^2 + 7 = 19$

8. $3(x-5)^2 + 2 = 17$

9. $2(x+7)^2 - 9 = -4$

10. $-4(x-3)^2 = -9$

Given $f(x) = x^2 - 4x + 5$ and $g(x) = 3x^2 + 2x - 1$ solve the following problems.

11. $f(2)$

12. $f(3)$

13. $f\left(-\frac{1}{2}\right)$

14. $g(-3)$

15. $g(2)$

Give the most specific classifications for each number.

16. 2

17. π

18. -7

19. 2.5

20. $\sqrt{5}$

21. The equation $h(t) = -2(t+1)^2 + 50$ give the height in meters at t seconds of a baseball thrown into the air.

A. What is the height of the ball after 2 seconds?

B. When does the ball hit the ground?