Name _____   Date _____

Challenge Practice
For use with the lesson "Solve Quadratic Equations by Graphing"

In Exercises 1–5, graph each quadratic function on the same coordinate system and use the graph to identify the points of intersection.

1. $y = 3x^2 + 1$
$y = 2x^2 + 5$

2. $y = \frac{1}{2}x^2 - 1$
$y = -\frac{1}{2}x^2 + 8$

3. $y = 2x^2 - \frac{1}{2}$
$y = x^2 + \frac{7}{2}$

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

5. $y = 2x^2 + 3x + 1$
$y = -2x^2 - 3x + 1$

In Exercises 6–8, use the following information.

A batter hits a baseball in such a way that its path is described by the quadratic function

$y = -0.00126875x^2 + 0.5x + 3.$

A fence of varying height surrounds the baseball field. Given the information in the exercise, determine whether the ball goes over the fence, hits the fence, or hits the ground before reaching the fence.

6. The fence is 380 feet away from the batter, and the fence is 10 feet high.

7. The fence is 410 feet away from the batter, and the fence is 5 feet high.

8. The fence is 360 feet away from the batter, and the fence is 15 feet high.