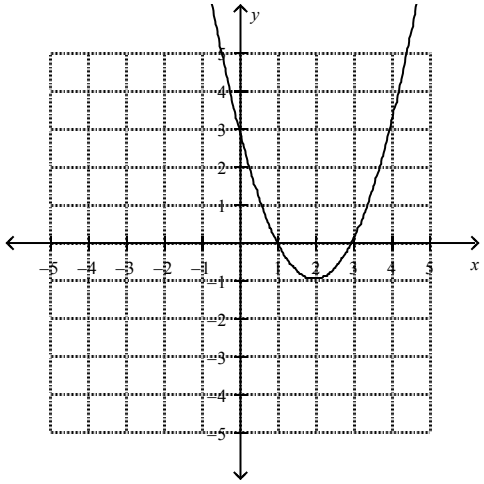
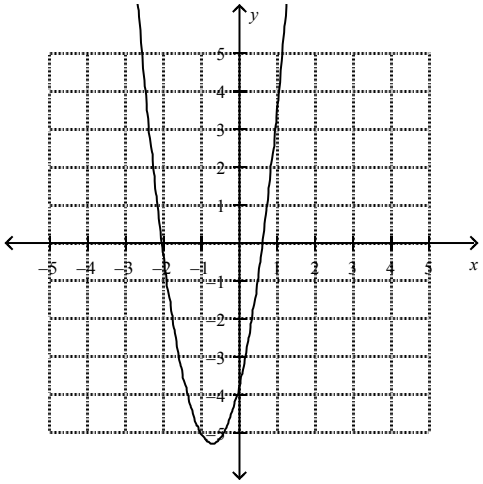
Name _____ Period _____ Date _____

Quadratic Inequalities & Word Problems Worksheet

1. Solve $x^2 - 4x + 3 > 0$.



2. Solve $3x^2 + 4x - 4 \leq 0$



3. Solve $x^2 - 5x - 14 \geq 0$.

4. Solve $2x^2 - 7x + 3 < 0$.

5. An object is launched at 19.6 meters per second from a 58.8-meter tall platform. The equation for the object's height at time t seconds after launch is $s(t) = -4.9t^2 + 19.6t + 58.8$, where s is in meters. When does the object hit the ground?

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6. An object is launched directly upward at 64 feet per second from a platform 80 feet high. The equation for the object's height is $h(t) = -16t^2 + 64t + 80$.

a) At how many seconds will the object have a height of 128 feet?

b) There are 2 answers. Why?

7. An object is launched from ground level directly upward at a rate of 48 meters per second. The equation for the object's height is $y = -16x^2 + 48x$.

a) What values of x is the object at **OR ABOVE** a height of 32 meters?

b) How long is the object at or above this height?

8. The area of a rectangle is 560 square inches. The length is 3 more than twice the width. Find the length and width of the rectangle. (Hint: draw a picture & set up a system of equations.)