

Name _____

Period _____ Date _____

Homework 5.2.1

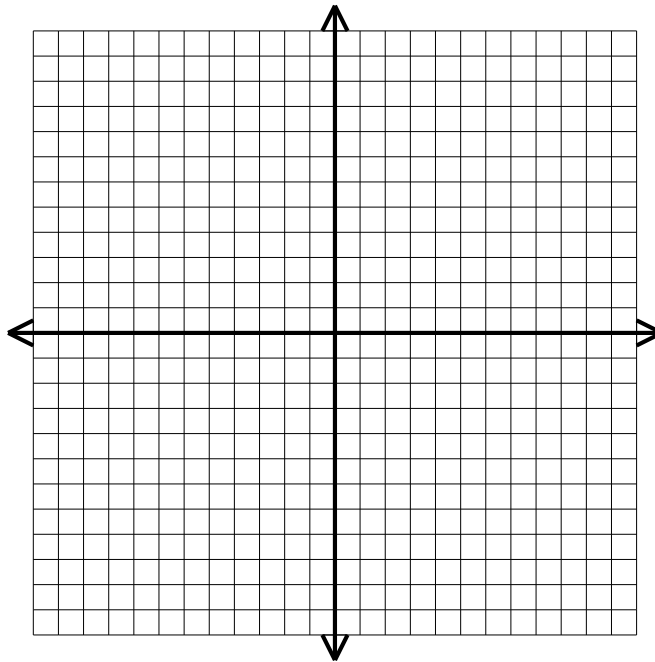
1. a) Determine the exact x-intercepts of:
(Exact means simplify the radical but don't use a calculator to find the decimal answer)

$$y = (x + 5)^2 - 3$$

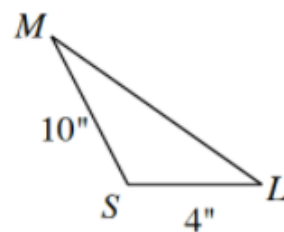
b) What are the approximate x-intercepts?
(use a calculator to do this)

b) What are the coordinates of the vertex of the parabola? Is your answer exact or approximate?

Sketch the graph of the above equation below.



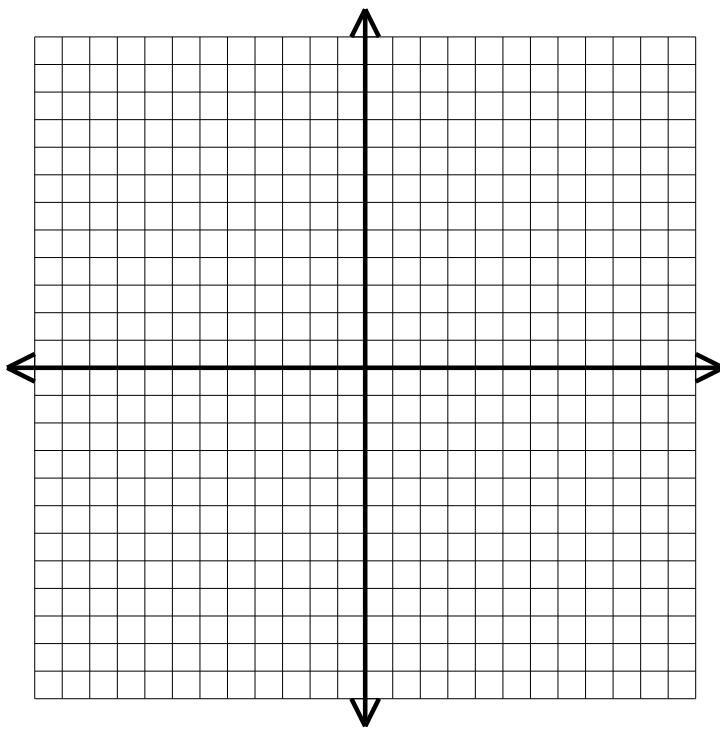
2) What are the possible lengths for side \overline{ML} in the triangle at right? Show how you know.



3) Rewrite the following expressions in simplified radical form.

a) $\sqrt{12}$	b) $\sqrt{50}$	c) $\sqrt{60}$	d) $\sqrt{200}$
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4) On graph below, plot and connect the points to form quadrilateral WXYZ if its vertices are W(3,7), X(3,4), Y(9,1), and Z(5,6).



a) What is the shape of quadrilateral WXYZ? Justify your conclusion.

b) Determine the perimeter of quadrilateral WXYZ.

c) If quadrilateral WXYZ is reflected using the transformation function $(x,y) \rightarrow (-x,y)$ to form quadrilateral W'X'Y'Z', what are the coordinates of vertex Y'?

5) For each diagram, write and solve a trigonometric equation to solve for the indicated angle.

