

Reminders: Please show all your work neatly on this worksheet.

This should be some of your most careful work!

Name: _____

	<i>Show your work neatly (when relevant).</i>	<i>Copy down your final answer.</i>
1.	Solve using the <u>square root property</u> : $2(x + 2)^2 - 9 = 7$ Give an exact answer using simplified radicals.	
2.	Solve the following using the <u>quadratic formula</u> . $2x^2 + 4x = 5$ Give an exact answer using simplified radicals.	
3.	Solve the following using the <u>quadratic formula</u> . $3x^2 - 4x + 6 = 0$ Give an exact answer using simplified radicals.	
4.	Solve the following using the <u>quadratic formula</u> . $5x^2 + 8x = -3$ Give an exact answer using simplified radicals.	
5.	Compute the discriminant of each and indicate the number and type of solutions: Show work for the discriminant computation and the value. a) $x^2 + 8x + 3 = 0$ b) $2x^2 + x + 3 = 0$ c) $9x^2 - 12x + 4 = 0$ d) $2x^2 + 6x = 0$	a) b) c) d)
6.	Find the value that should be added to the binomial to make it a PST. Rewrite as a binomial squared for your final answer: $x^2 - \frac{9}{5}x$ Show all work.	

Reminders: Please **show all your work** neatly on this worksheet.

This should be some of your most careful work!

7.	Solve the following by <u>completing the square</u> . $x^2 + 4x = 32$	
8.	Solve the following by <u>completing the square</u> . $x^2 + 6x + 2 = 0$	
9.	Solve the following by <u>completing the square</u> . $x^2 - 4x + 8 = 0$	
10.	Solve the following by <u>completing the square</u> . $2x^2 + 3x = 4$	
11.	Find the x-intercepts of the following quadratic function: $f(x) = x^2 - 6x - 27$ Write appropriately as ordered pairs and show all work.	
12.	The doorway to a room is 4 feet wide and 8 feet high. Two construction workers need to take sheets of plywood (rectangles whose edge will create a diagonal line through the doorway), through the doorway. What is the largest sheet of plywood that will fit through the doorway diagonally? Hint: Doorway is a rectangle and the diagonal created by the plywood creates a triangle. Show all work. Give an exact answer using simplified radicals and as an approximation to 1 decimal. Don't forget units.	
13- 14	For the quadratics in 13 & 14 give all the requested information and graph it on the graph paper provided. Show all work. a) Indicate whether the parabola will face up (have a minimum) or down (have a maximum) and indicate why. b) Give the vertex (as an ordered pair) c) Give the y-intercept (as an ordered pair) d) Give the x-intercept(s) if they exist (as an ordered pair) e) Use the graph and symmetry to find and label a 5 th point symmetry to the y-intercept.	

Reminders: Please show all your work neatly on this worksheet.

This should be some of your most careful work!

Note: If your parabola doesn't have 5 points, you will need to use substitution to find a 4th and symmetry to find a 5th. Indicate any such work in part e).

13. The quadratic function is: $f(x) = x^2 + 2x$

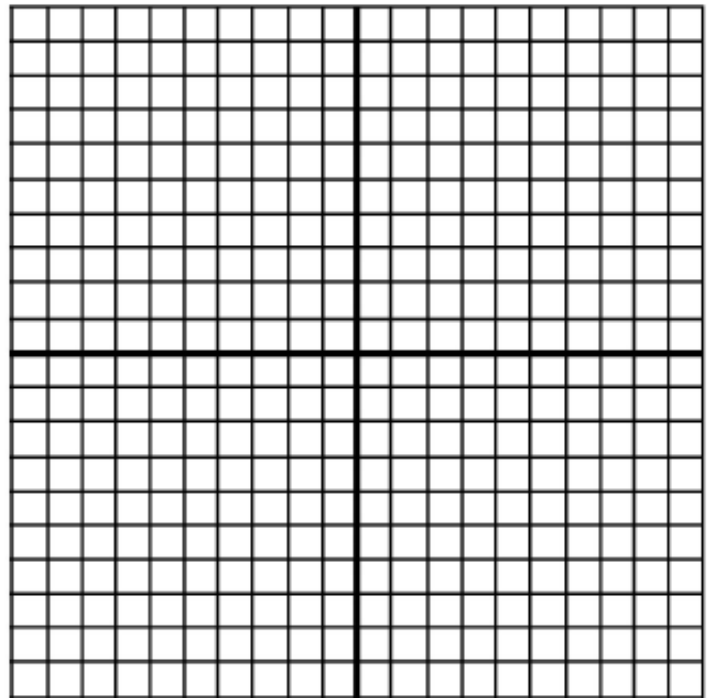
a)

b)

c)

d)

e)



14. The quadratic function is: $f(x) = -x^2 + 2x + 3$

a)

b)

c)

d)

e)

