Name: _____ Block: _____ Ms. Soo January 7, 2020

Mark
$\frac{}{23}$

PC11 Quiz #16

Part A: Vocabulary

1. ***Matching*** – Match the correct vocabulary word with the definition by writing the correct letter next to the definition. Not all the words will be used! **/8 marks**

	1. This form of a quadratic function, $y = a(x - x_1)(x - x_2)$, is called _____.
	2. The equation $A = P\left(1 + \frac{i}{n}\right)^{nt}$ is used to calculate _____.
	3. A polynomial with three terms is called a _____.
	4. The name of the graph of a quadratic function.
	5. The symbols $<, \leq, \geq, >$ are used to represent _____.
	6. A quadratic function in this form helps to directly identify the vertex and direction of the opening.
	7. Given an oblique triangle where we know all three sides which law do we use to first help us solve it?
	8. The name of this number set, $\{\ldots, -2, -1, 0, 1, 2, \ldots\}$, is _____.

A. Sine Law
B. Cosine Law
C. Integers
D. Factored Form
E. General Form
F. Vertex Form
G. Parabola
H. Whole Numbers
I. Simple Interest
J. Compound Interest
K. Difference of Squares
L. Axis of Symmetry
M. Vertex
N. Trinomial
O. Inequalities

Part B: Review Material

2. A quadratic function has x-intercepts -2 and 9. What is the equation of the AOS? **/1 mark**

3. What is the equation of a quadratic function in factored form with zeros -2 and 6, and the point ***A*** *(0, 14)* is on the graph? **/2 marks**

4. Solve using the Quadratic Formula. **/2 marks**

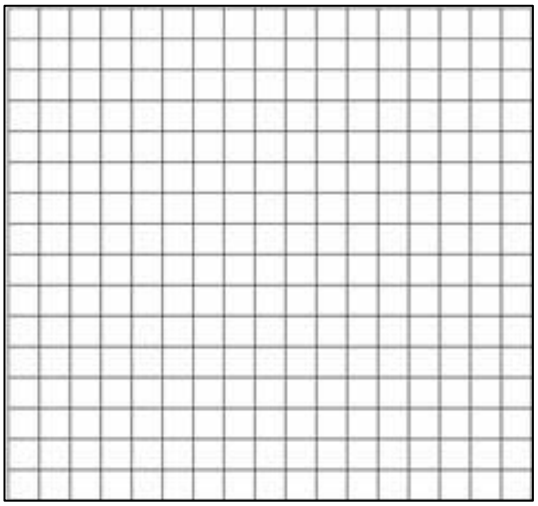
$x^2 - 11x + 3 = 0$

5. Write this entire radical as a mixed radical in simplest form: **/1 mark**

$\sqrt[3]{192x^3y^5}$

6. Graph the following quadratic function and identify the given properties. *Show your work!* **/4 marks**
(1 mark sketch, 3 marks properties)

$$y = -x^2 + 4x + 5$$



x-intercept(s):

y-intercept:

Vertex:

Axis of Symmetry:

Domain:

Range:

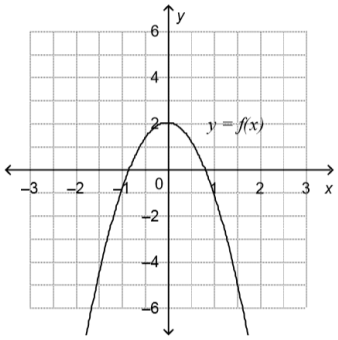
7. Describe the transformations of the quadratic function from $y = x^2$ to $y = (x + 1)^2 + 4$ **/1 mark**

_____

_____

_____

8. Determine an equation in **vertex form** of this graph a quadratic function. **/1 mark**



$y =$ _____

Part C: New Material

9. Solve the inequality by graphing on a number line. **/2 marks**

$$x^2 + 3x - 18 > 0$$

10. Explain what is a **<u>critical value</u>** using 1 English sentence? **/1 mark**

_____