Algebra 1

Name_____ ID: 1

Unit 2 Test Review

Date_____ Period____

1) Given the quadratic formula is:

$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

Find the roots.

$-6.5x^2 + 74 = 0$

2) Use the quadratic formula to solve the equation $4n^2 = -12n + 5$

Given the quadratic formula is:

$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

3) What are the roots of the equation $x^2 + 8x - 18 = 0$?

Given the quadratic formula is:

$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

4) Use the discriminate to determine whether the equations has two rational solutions, one rational solution, or two imaginary solutions. Do not solve.

$s^2 + 5s - 6 = 0$

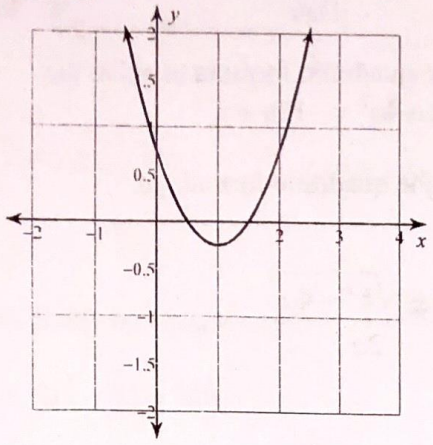
5) Use the discriminate to determine whether the equations has two rational solutions, one rational solution, or two imaginary solutions. Do not solve.

$t^2 + 6t + 9 = 0$

6) Use the discriminate to determine whether the equations has two rational solutions, one raltional solution, or two imaginary solutions. Do not solve.

$6y^2 = 8y - 9$

7) Which discriminant could create the graph below?



A) $b^2 - 4ac > 0$

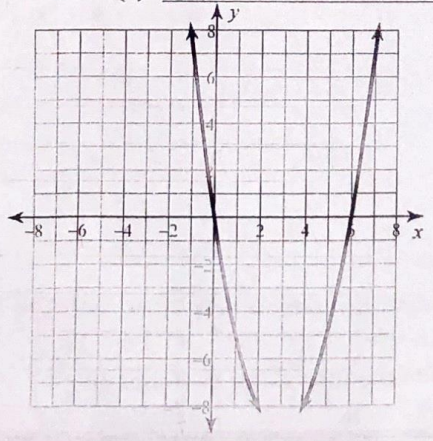
B) $b^2 - 4ac = 0$

C) $b^2 - 4ac < 0$

Use the graph to describe the discriminant and find the solutions.

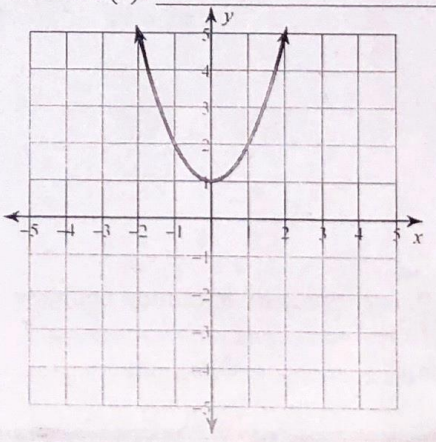
8) The discriminant is:
a) positive b) negative c) zero

Solution(s): _____



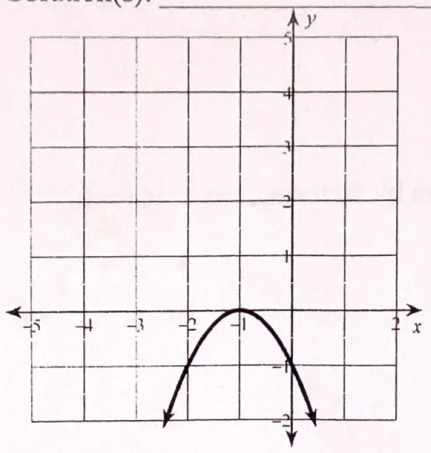
9) The discriminant is:
a) positive b) negative c) zero

Solution(s): _____



10) The discriminant is:
a) positive b) negative c) zero

Solution(s): _____



Choose the correct answer.

11)
$-x^2 + 36 = 0$

Make a table and identfy where the zeros are.

12) To solve $x^2 - 4x - 5$, make a table (HORIZONTAL) and identify the zeros.

13) Solve the equation by square roots.

$x^2 = 81$

14) Solve the equation by square roots.

$(x-3)^2 = 36$

15) Solve by square roots.

$5x^2 - 16 = 109$

16) Solve by factoring $16x^2 - 8x = 0$

17) The function $f(x) = x^2 - 7x - 8$, written in correctly factored form, has what zeros?

18) Solve $(x-9)(6x+4) = 0$ by using the Zero Product property.

Solve the following equations by factoring and write your answer in the blank provided.

19) $x^2 - x - 6 = 0$

20) $6x^2 - 49 = 2x^2$

Choose the correct answer.

21) Find n by **completing the square** so that it makes a perfect-square trinomial and write it in binomial form.

$x^2 + 16x + \_\_\_\_$