

Bellwork: Algebra 1

1. Happy Wednesday :)
2. Take out both of your homeworks.
3. If you made test corrections, turn them in now.
4. You need a calculator.
5. Answer the following question on your WEDNESDAY

Bellwork:

Classify each polynomial as one of the following:

- a) The difference of two squares
- b) A perfect square trinomial
- c) A trinomial that is not a perfect square.

$$(a+b)^2$$

$$25x^2 - 1$$

	$5x$	1
$5x$	$25x^2$	$5x$
-1	$-5x$	-1

$$(5x-1)(5x-1)$$

(a)

$$x^2 - 10x + 16$$

$a^2 - 2ab + b^2$

$$a = x$$

$$b = -4$$

$$2ab = 2(x)(-4)$$

$$= -8x$$

(c)

$$x^2 - 10x + 25$$

$$a = x$$

$$b = 5, -5$$

$$2ab = -10x$$

(b)

$$(a+b)^2$$

$$(x-5)^2$$

1. Solve $x^2 - 81 = 0$.

$$\sqrt{x^2} = \sqrt{81}$$

$$x = \{-9, 9\}$$

2. Solve $2x^2 - 26 = 0$.

$$2x^2 = 26$$

$$\sqrt{x^2} = \sqrt{13}$$

$$x = \pm\sqrt{13}$$

3. Which of the following are the roots of the quadratic function below? Select all that apply.

$$f(x) = x^2 - 144.$$

- 72
- 12
- 2
- 0
- 2
- 12
- 72

$$x^2 - 144 = 0$$
$$\sqrt{x^2} = \sqrt{144}$$

$$x = \{-12, 12\}$$

5. Which quadratic function has a bigger positive solution?

$$f(x) = 2x^2 - 32$$

$$g(x) = 12x^2 - 48$$

$$h(x) = 100x^2$$

Explain your answer.

$$2x^2 - 32 = 0$$

$$\frac{2x^2}{2} = \frac{32}{2}$$

$$\sqrt{x^2} = \sqrt{16}$$

$$x = \{-4, 4\}$$

$$\frac{12x^2}{12} = \frac{48}{12}$$

$$\sqrt{x^2} = \sqrt{4}$$

$$x = \{-2, 2\}$$

$$\frac{100x^2}{100} = \frac{0}{100}$$

$$\sqrt{x^2} = \sqrt{0}$$

$$x = \{0\}$$

6. Find the roots of the function, $f(x) = x^2 - 225$.

$$\pm 3\sqrt{5}$$

$$x^2 - 225 = 0$$

$$\sqrt{x^2} = \sqrt{225}$$

$$x = 15 \quad x = -15$$

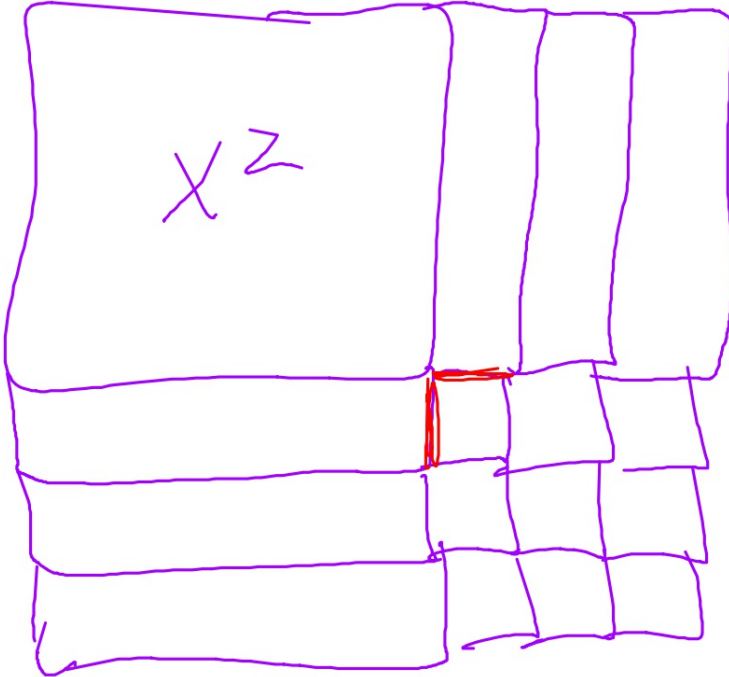
$$x = \{-15, 15\}$$

7. Juanita is trying to find the roots for the quadratic function $f(x) = x^2 + 64$. She argues that there is no solution. Is Juanita correct? Justify your answer.

Juanita is correct. This quadratic function has no REAL solutions because she would have to take the square root of -64 which results in imaginary roots.

$$x^2 + 6x + 9$$

data $a = x$
 $b = 3$



$$\underline{(a+b)^2}$$

$$(x+3)^2$$

$$(x+3)(x+3)$$