G.N.A.W.
On Radicals

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Flamingo Math

GNAW on Radicals

G.N.A.W. [Rule of Four]

Name _____

Date _____ Period _____
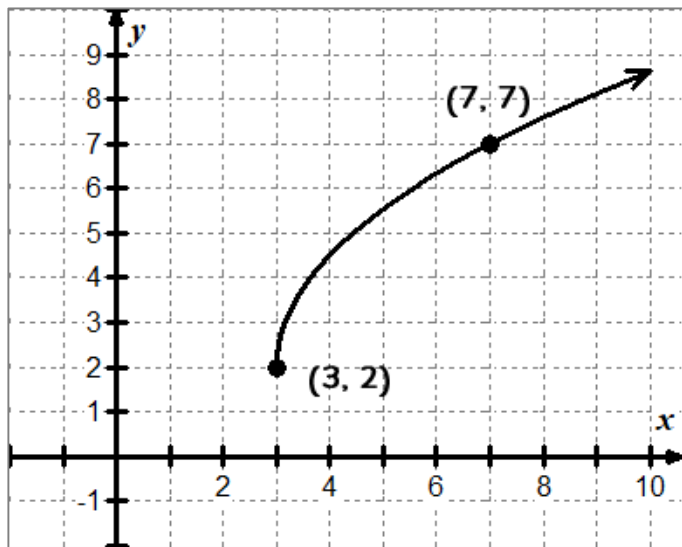
Graphically	Numerically
Given the graph below, write the model for standard form of a radical equation: _____ 	Use the ordered pairs on the graph and the standard form of the equation to find the "a" value.

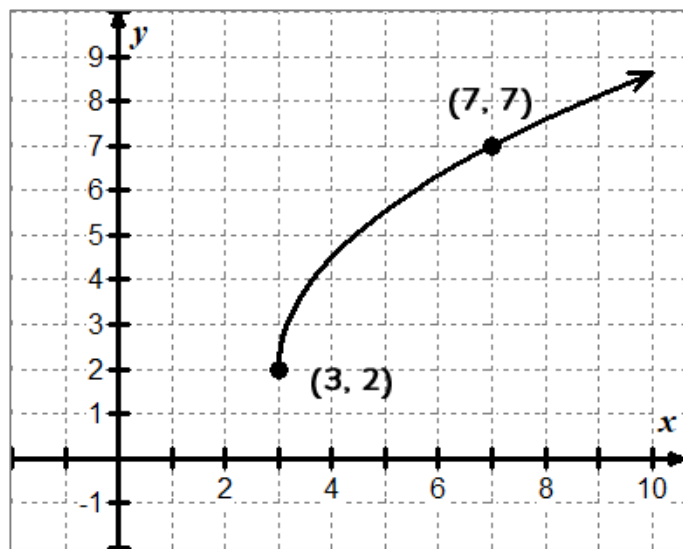| Algebraically	Verbally
Write the standard form of the radical equation. Use this equation to find the value for *x* when *y* =19.5.	1. State the domain of the function. 2. State the range of the function. 3. Identify the values of *h* and *k*. 4. Describe the translation of the function from the parent graph $y = \sqrt{x}$

GNAW on Radicals

G.N.A.W. [Rule of Four]

Name _____**KEY**_____

Date _____ Period _____

Graphically	Numerically
Given the graph below, write the model for standard form of a radical equation: $y = a\sqrt{x-h} + k$	Use the ordered pairs on the graph and the standard form of the equation to find the "a" value.

Graph shows points (3, 2) and (7, 7).

Numerically:

$$7 = a\sqrt{7-3} + 2$$

$$5 = a\sqrt{4}$$

$$5 = 2a$$

$$a = 2.5$$

$$y = 2.5\sqrt{x-3} + 2$$

Algebraically	Verbally

Algebraically

Write the standard form of the radical equation. Use this equation to find the value for x when $y = 19.5$.

$$y = 2.5\sqrt{x-3} + 2$$

$$19.5 = 2.5\sqrt{x-3} + 2$$

$$17.5 = 2.5\sqrt{x-3}$$

$$7 = \sqrt{x-3}$$

$$49 = x - 3$$

$$x = 52$$

Verbally

1. State the domain of the function.

$$[3, \infty)$$

2. State the range of the function.

$$[2, \infty)$$

3. Identify the values of h and k.

$$h = 3, k = 2$$

4. Describe the translation of the function from the parent graph $y = \sqrt{x}$

The parent function have a vertical stretch by a factor of 2.5, is translated 3 units right and 2 units up.