Bellwork

Alg 2

Wednesday, October 2, 2019

1. Given this inverse function: $f^{-1}(x) = \sqrt{\frac{x-1}{7}} + 3$

Find the equation of the original function f(x) and the domain restriction that created this inverse.

$$f(x) =$$

Domain restriction:

2. What type of function would describe the inverse of this data?

			•			
X	-2	1	6	13	22	
Y	1	2	3	4	5	

3. The y-values in the table are called triangular numbers because those numbers of objects can be shaped to form a triangle. What type of function would model the relationship if the number of rows in the triangle, x, is dependent on the number of pennies,y?

х	1	2	3	4	5
v	1	3	6	10	15

् linear

ਂ quadratic

exponential

square root



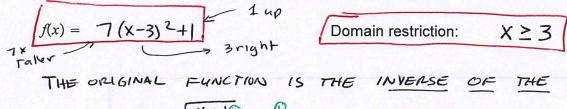
Bellwork

Alg 2 Wednesday, October 2, 2019

1 ANSWERS

1. Given this inverse function: $f^{-1}(x) = \sqrt{\frac{x-1}{7}} + 3$

Find the equation of the original function f(x) and the domain restriction that created this inverse.



$$X = \sqrt{\frac{3^{2} - 10}{3}} + 3^{10} \longrightarrow f(x) = 7(x - 3)^{2} + 1$$

2. What type of function would describe the inverse of this data?

۷.	vviia	ιιy	he	OI IL	incuic	on would describe the inverse of this da
X	-2	1	6	13	22	orig
Y	1	2	3	4	5	XIY
		1				(-2 1
						NOT 1 2
						A (0)
						constant 13 4
						change 22 5
						SO SWITCH NS
						to create the
						to Inve

INVERSE IS A

QUADRATIC

3. The y-values in the table are called triangular numbers because those numbers of objects can be shaped to form a triangle. What type of function would model the relationship if the number of rows in the triangle, x, is dependent on the number of pennies, y?

		X	1	2	3	4	5	
		у	1	3	6	10	15	
ା linear ୍ exponel							o quad o squar	ratic re root
onstant difference	X 1 2 3	9 Y Y S	15T. dH 2	7	znd diff			Therefore, the inverse will be modeled with a square root function

C

3 6 5 4 5 i
4 10 5 5 5 i
5 15 constant 2nd diff in original data
so original data is modeled
by a Guadratic