

Precalculus Pretest B: Chapter 1

1. Given that  $f(3) = -1$  and  $f^{-1}(x) = \frac{5x^2 + kx + 1}{\sqrt{-x}}$ , determine the value of  $k$ .

2. Sketch the following absolute value functions and check with the TI-89:

a)  $y = |x + 1|$

c)  $y = -|x + 1|$

e)  $y = \sqrt{x - 2} - 3$

b)  $y + 1 = |x|$

d)  $y = |1 - x|$

f)  $y = ||x| - 5|$

3. Determine the basic function and state the transformations on each. Then sketch BY HAND both the basic and transformed function on the same grid and state the domain and range.

a)  $y = 2x - 3$

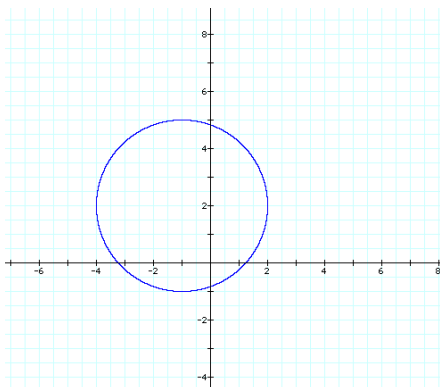
b)  $y = -x^2 + 5x - 1$

c)  $y = \sqrt{-x + 4} - 2$

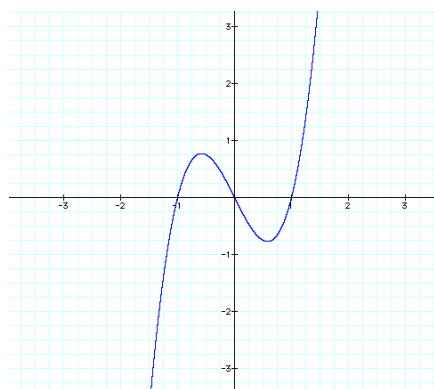
d)  $y = -|x^2 - 4| + 1$

4. For each: copy, sketch the inverses, state the domain and range for both original and inverse graphs and determine the kind of mapping (relation, function or 1-1 function):

a)

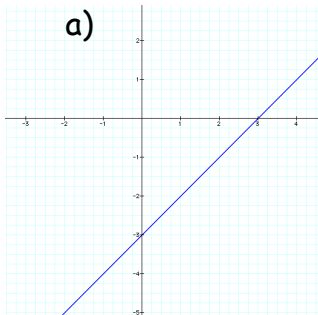


b)

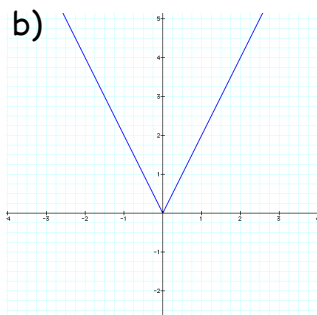


5. Identify the untransformed (basic) function for each. Then list the transformations on it that produces each graph and state the equation of the transformed function.

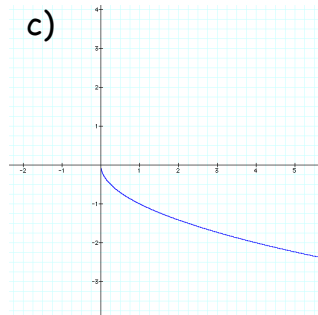
a)



b)



c)



d)

