

## Homework: p. 166-167 #12-24 multiples of 4

In 11–16, determine if the function has an inverse. If so, list the pairs of the inverse function. If not, explain why there is no inverse function.

12.  $\{(1, 4), (2, 7), (1, 10), (4, 13)\}$

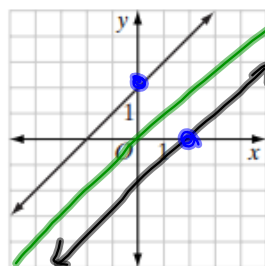
16.  $\{(x, y) : y = x^2 + 2 \text{ for } 0 \leq x \leq 5\}$

In 17–20: **a.** Find the inverse of each given function. **b.** Describe the domain and range of each given function and its inverse in terms of the largest possible subset of the real numbers.

20.  $f(x) = \sqrt{x}$

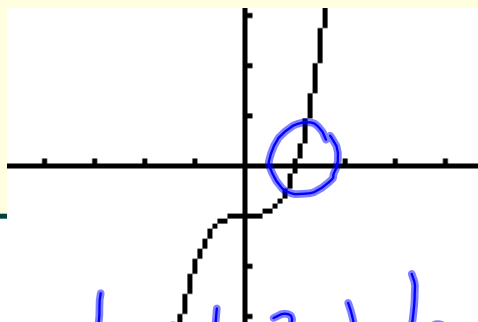
In 24–26, sketch the inverse of the given function.

24.



Warm Up: Graphically determine if

Root:  $x=1$   
 $(x-1)$  is a factor of  $x^3-1$ .



$(x-1)$  is a factor b/c there is a root @  $x=1$

$$(1)^3 - 1 = 0$$

$x=1$  is a root b/c when evaluated the function = 0

∴  $(x-1)$  is a factor  
 (therefore)

X	Y1
0	-1
1	0
2	7
3	26
4	63
5	124
6	215

Press + for  $\Delta|b|$

Regents Question 6/2016



Given  $f^{-1}(x) = -\frac{3}{4}x + 2$ , which equation represents  $f(x)$ ?

1)  $f(x) = \frac{4}{3}x - \frac{8}{3}$

2)  $f(x) = -\frac{4}{3}x + \frac{8}{3}$

3)  $f(x) = \frac{3}{4}x - 2$

4)  $f(x) = -\frac{3}{4}x + 2$

Alg

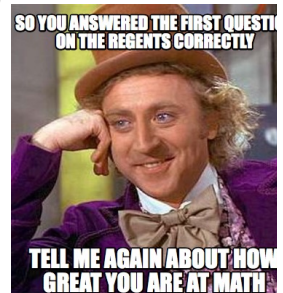
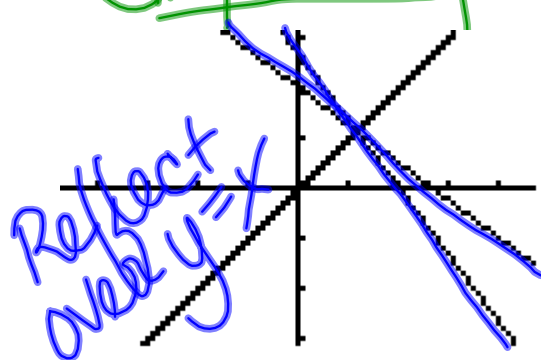
$y = -\frac{3}{4}x + 2$

$x = -\frac{3}{4}y + 2$

$-\frac{4}{3}(x-2) = (-\frac{3}{4}y)(-\frac{4}{3})$

$-\frac{4}{3}x + \frac{8}{3} = y$

Graphically



IV

$$y = \frac{x+1}{x-2}$$

~~$$x = \frac{y+1}{y-2}$$~~

$$xy - 2x = y + 1$$

y's

$$xy - y = 2x + 1$$

$$y(x-1) = 2x+1$$

$$y = \frac{2x+1}{x-1}$$