1

Which of the following is the inverse relation to the set of ordered pairs below?

$$\{(-10,5),(-7,9),(0,6),(8,-12)\}$$

a) $\{(10,-5),(7,-9),(0,-6),(-8,12)\}$ go to station 6

b) $\{(5,-10),(9,-7),(6,0),(-12,8)\}$ go to station 3

c) $\{(-5,10),(-9,7),(-6,0),(12,-8)\}$ go to station 9

d) $\{(-10,-5),(-7,-9),(0,-6),(8,12)\}$ go to station 10

2

Find the inverse of the function.

$$f(x)=\frac{2}{x+7}$$

a) $f^{-1}(x)=\frac{x}{7+2x}$ go to station 1

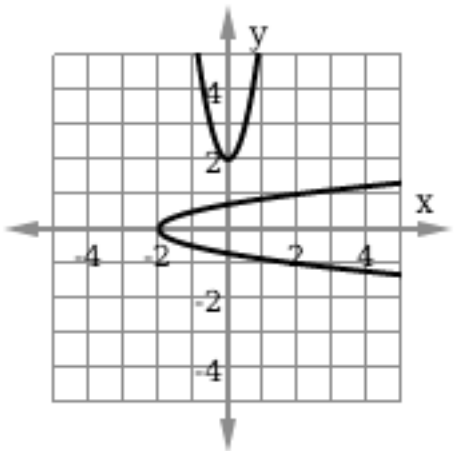
b) $f^{-1}(x)=\frac{-7x+2}{x}$ go to station 9

c) Not a one-to-one function go to station 8

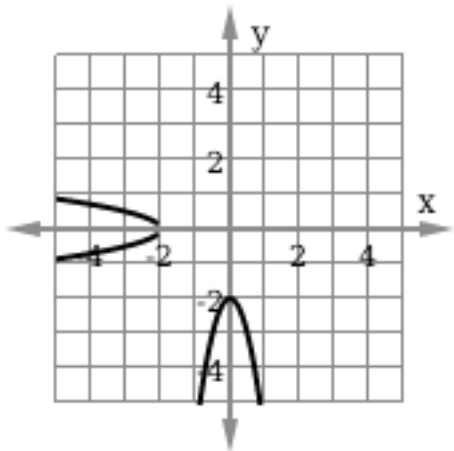
d) $f^{-1}(x)=\frac{7+2x}{x}$ go to station 4

3

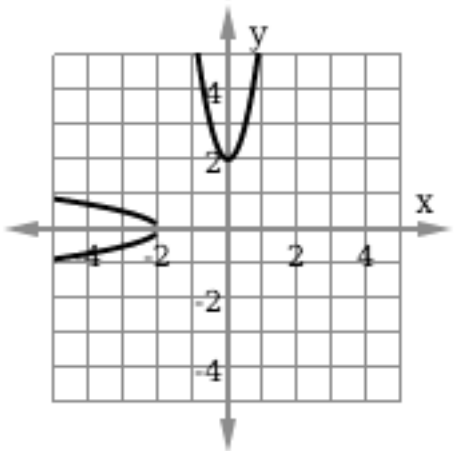
Which is the graph of $y = -4x^2 - 2$ and its inverse?

a) 

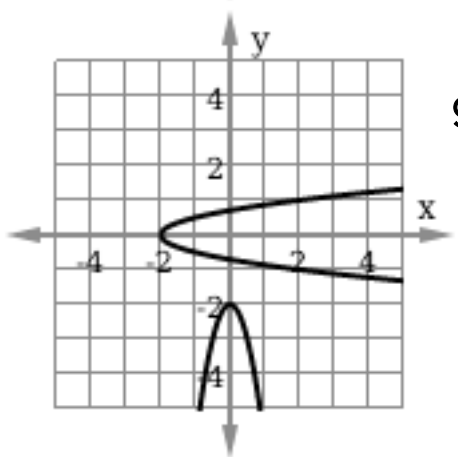
go to station 6

b) 

go to station 6

c) 

go to station 2

d) 

go to station 10

4

Find the inverse of $y = (8 - 2x)^2$. Determine if the inverse is a function.

a) $y = \frac{8 \pm \sqrt{x}}{2}$ The inverse is not a function. go to station 8

b) $y = \pm\sqrt{\frac{8 + x}{2}}$ The inverse is not a function. go to station 7

c) $y = \pm\sqrt{\frac{8 + x}{2}}$ The inverse is a function. go to station 9

d) $y = \frac{8 \pm \sqrt{x}}{2}$ The inverse is a function. go to station 2

5

Determine whether the pair of functions are inverses.

$$f(x) = 8x - 10$$

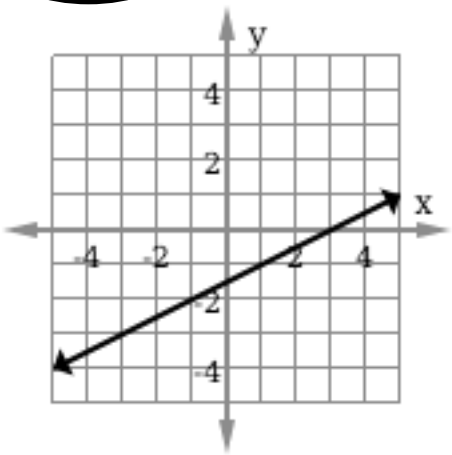
$$g(x) = \frac{1}{8}x + \frac{5}{4}$$

a) No, the functions are not inverses. go to station 7

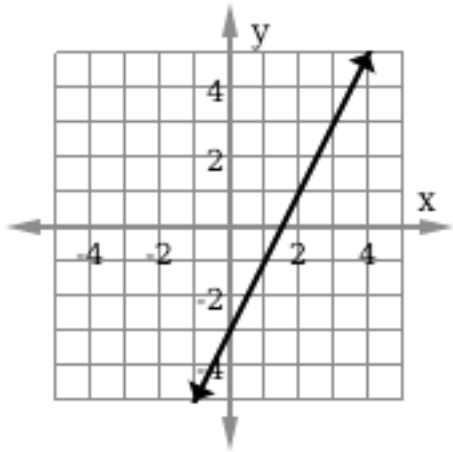
b) Yes, the functions are inverses. go to station 4

6

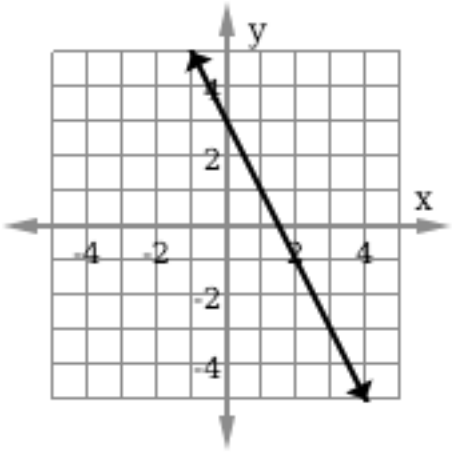
Which is the graph of the inverse of $f(x) = 2x - 3$?

a) 

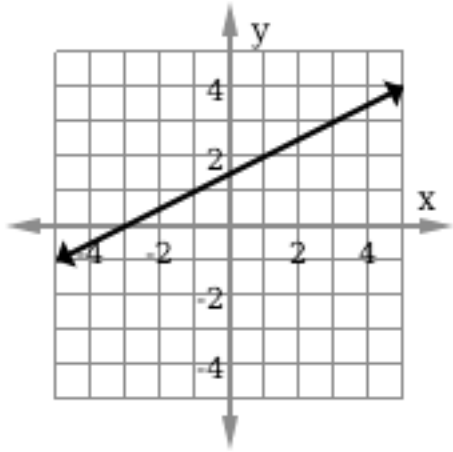
go to station 1

b) 

go to station 4

c) 

go to station 9

d) 

go to station 10

7

Find the inverse of the function.

$$f(x)=\frac{x+4}{2x-5}$$

a) $f^{-1}(x)=\frac{5x+4}{2x-1}$ go to station 11

b) $f^{-1}(x)=\frac{2x-1}{5x+4}$ go to station 2

c) $f^{-1}(x)=\frac{-x-4}{-2x+5}$ go to station 4

d) $f^{-1}(x)=\frac{5x-4}{-2x-5}$ go to station 7

8

Which statement about graphs and their inverses is true?

a) They are symmetric about the x-axis. go to station 11

b) They are symmetric about the origin. go to station 7

c) They are symmetric about the line $y = x$. go to station 1

d) They are symmetric about the y-axis. go to station 3

9

If f and g are inverses of each other and the domain of $(f \circ g)(x)$ is the set of all real numbers, find $f\left(f^{-1}(\pi)\right)$.

a) $\frac{1}{\pi}$ go to station 2

b) 0 go to station 4

c) π go to station 7

d) Unable to tell go to station 8

10

If $f(x) = -2x + 8$, then $f^{-1}(1) =$

a) $\frac{2}{9}$ go to station 11

b) $\frac{9}{2}$ go to station 4

c) 0 go to station 8

d) $\frac{7}{2}$ go to station 2

11

If $f(x) = x^3 - 1$, then $f^{-1}(26) =$

a) 1 go to station 7

b) 2 go to station 9

c) 3 go to station 5

d) 4 go to station 4

e) 0 go to station 2