

1. Find the inverse  $f^{-1}$  of the function  $f$ .

$$f(x) = \sqrt[3]{x} - 3$$

A.  $f^{-1}(x) = x^3 - 3$

B.  $f^{-1}(x) = x^3 + 3$

C.  $f^{-1}(x) = (x + 3)^3$

D.  $f^{-1}(x) = x^3 + 27$

E.  $f^{-1}(x) = x^3 - 27$

F.  $f^{-1}(x) = \sqrt[3]{x + 3}$

G.  $f^{-1}(x) = \sqrt[3]{x - 3}$

H.  $f^{-1}(x) = (x - 3)^3$

2. Write the inverse of the function  $f$ .

$$f = \{(-4, \pi), (8, 7), (\pi, 6), (7, -2)\}$$

A.  $f^{-1} = \{(-2, 8), (-4, \pi), (8, 7), (\pi, 6)\}$

B.  $f^{-1} = \{(7, 8), (6, \pi), (-2, 7), (-4, 6)\}$

C.  $f^{-1} = \{(-4, \pi), (8, 7), (\pi, 6), (7, -2)\}$

D.  $f^{-1} = \{(\pi, -4), (7, 8), (6, \pi), (-2, 7)\}$

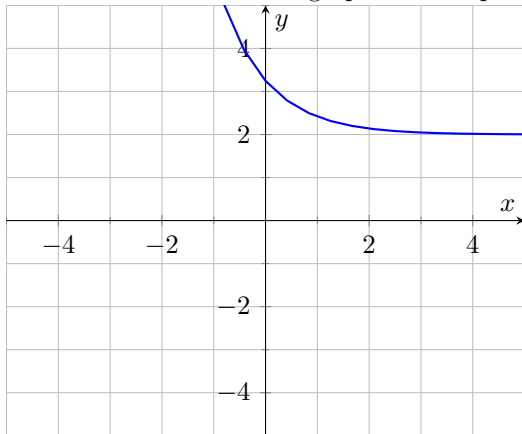
E.  $f^{-1} = \{(8, -2), (\pi, -4), (7, 8), (6, \pi)\}$

F.  $f^{-1} = \{(7, -2), (6, -4), (-2, 8), (-4, \pi)\}$

G.  $f^{-1} = \{(8, 7), (\pi, 6), (7, -2), (6, -4)\}$

H.  $f^{-1} = \{(-2, 7), (-4, 6), (8, -2), (\pi, -4)\}$

3. TRUE or FALSE: The graph below represents a one-to-one function. (Hint: use the horizontal line test.)



A. False

B. True

4. Find the inverse  $f^{-1}$  of the function  $f$ .

$$f(x) = 5x - 9$$

A.  $f^{-1}(x) = \frac{1}{9}x + 5$

B.  $f^{-1}(x) = \frac{x+5}{9}$

C.  $f^{-1}(x) = \frac{1}{5}x + 9$

D.  $f^{-1}(x) = \frac{x-5}{9}$

E.  $f^{-1}(x) = \frac{1}{9}x - 5$

F.  $f^{-1}(x) = \frac{1}{5}x - 9$

G.  $f^{-1}(x) = \frac{x-9}{5}$

H.  $f^{-1}(x) = \frac{x+9}{5}$

5. Find the inverse  $f^{-1}$  of the function  $f$ .

$$f(x) = \sqrt[3]{x-3}$$

A.  $f^{-1}(x) = x^3 - 3$

B.  $f^{-1}(x) = x^3 + 27$

C.  $f^{-1}(x) = x^3 + 3$

D.  $f^{-1}(x) = \sqrt[3]{x+3}$

E.  $f^{-1}(x) = x^3 - 27$

F.  $f^{-1}(x) = (x+3)^3$

G.  $f^{-1}(x) = (x-3)^3$

H.  $f^{-1}(x) = \sqrt[3]{x-3}$

6. Find the inverse  $f^{-1}$  of the function  $f$ .

$$f(x) = \sqrt[3]{x+4}$$

A.  $f^{-1}(x) = x^3 - 64$

B.  $f^{-1}(x) = x^3 + 64$

C.  $f^{-1}(x) = (x-4)^3$

D.  $f^{-1}(x) = (x+4)^3$

E.  $f^{-1}(x) = \sqrt[3]{x-4}$

F.  $f^{-1}(x) = \sqrt[3]{x+4}$

G.  $f^{-1}(x) = x^3 - 4$

H.  $f^{-1}(x) = x^3 + 4$

7. Find the inverse  $f^{-1}$  of the function  $f$ .

$$f(x) = 5x + 3$$

A.  $f^{-1}(x) = \frac{x-3}{5}$

B.  $f^{-1}(x) = \frac{x+3}{5}$

C.  $f^{-1}(x) = \frac{1}{3}x + 5$

D.  $f^{-1}(x) = \frac{x-5}{3}$

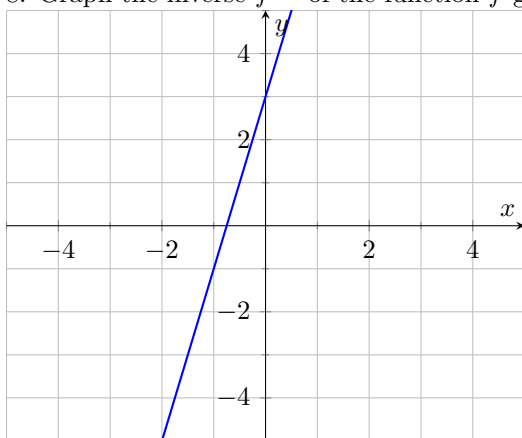
E.  $f^{-1}(x) = \frac{x+5}{3}$

F.  $f^{-1}(x) = \frac{1}{3}x - 5$

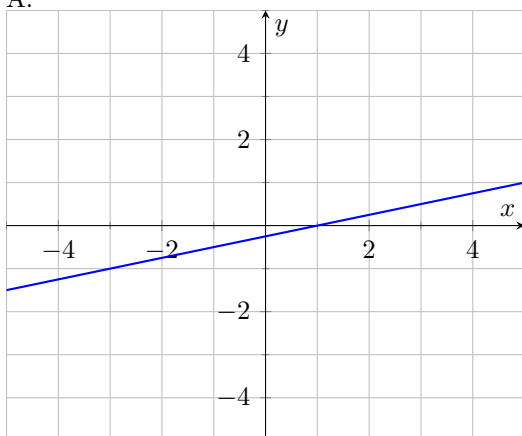
G.  $f^{-1}(x) = \frac{1}{5}x - 3$

H.  $f^{-1}(x) = \frac{1}{5}x + 3$

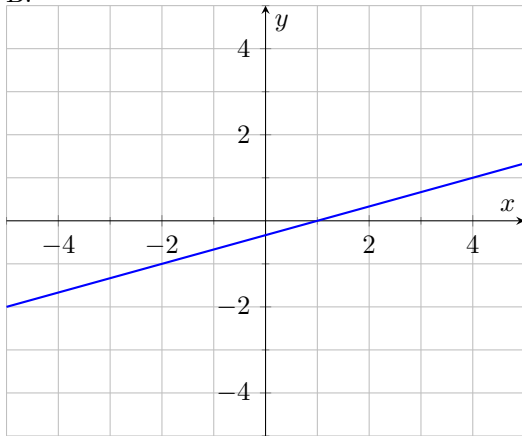
8. Graph the inverse  $f^{-1}$  of the function  $f$  graphed below.



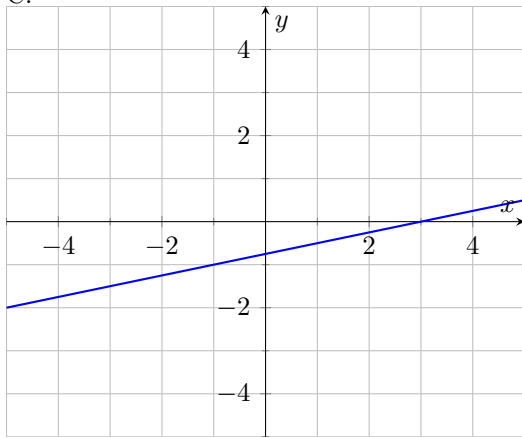
A.



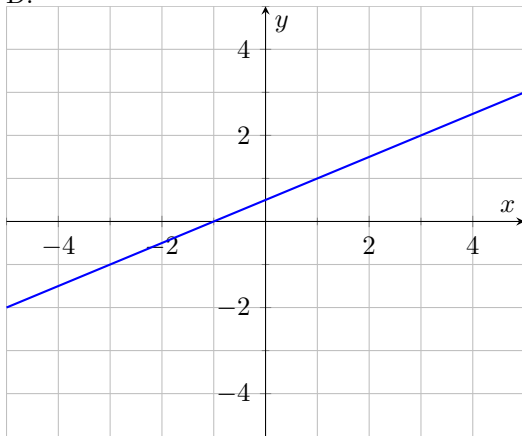
B.



C.

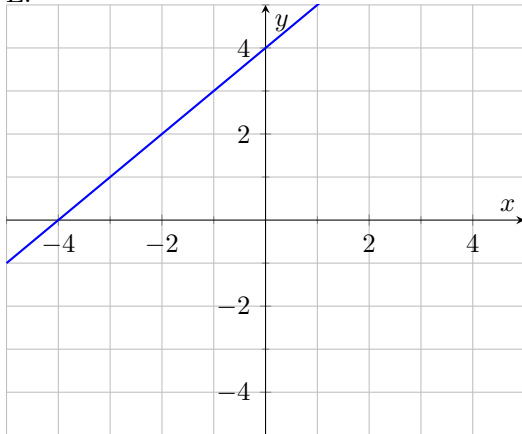


D.

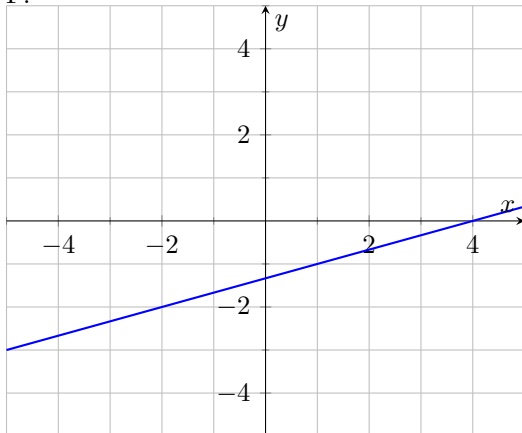


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E.

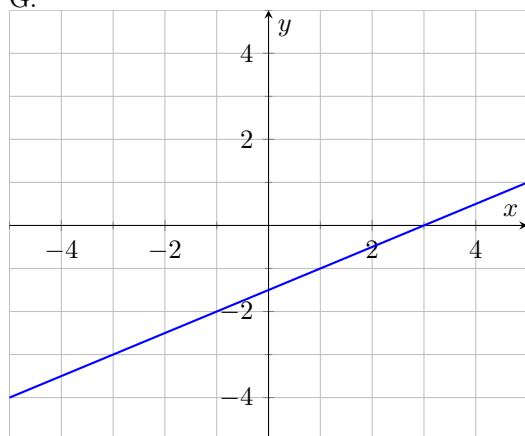


F.



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G.



H.

