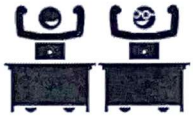
Name: Answers! Class:


Communication


Successful Partnership


Encouragement


Solving Problem Together


Collaboration

Question 01

Find the inverse of the function below.

$$f(x) = 3x + 2$$

$y = 3x + 2$

$x = 3y + 2$

$3y + 2 = x$

$-2 \quad -2$

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

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

$$f^{-1}(x) = \frac{x-2}{3}$$

Question 02

Find the inverse of the function below.

$$f(x) = \frac{1}{4}x - 10$$

$y = \frac{1}{4}x - 10$

$x = \frac{1}{4}y - 10$

$\frac{1}{4}y - 10 = x$

$+10 \quad +10$

$4\left(\frac{1}{4}y = x + 10\right)$

$y = 4x + 40$

$$f^{-1}(x) = 4x + 40$$

Question 03

Find the inverse of the function below.

$$f(x) = -2x - 12$$

$y = -2x - 12$

$x = -2y - 12$

$-2y - 12 = x$

$-2y = x + 12$

$y = \frac{x+12}{-2}$

$$f^{-1}(x) = \frac{-x-12}{2}$$

Question 04

Find the inverse of the function below.

$$f(x) = \frac{2}{5}x + 20$$

$y = \frac{2}{5}x + 20$

$x = \frac{2}{5}y + 20$

$\frac{2}{5}y + 20 = x$

$\frac{5}{2}\left(\frac{2}{5}y = x - 20\right)$

$y = \frac{5x-100}{2}$

$$f^{-1}(x) = \frac{5x-100}{2}$$

Question 05

Find the inverse of the function below.

$$f(x) = x^2$$

$y = x^2$

$x = y^2$

$y^2 = x$

$\sqrt{y^2} = \sqrt{x}$

$$f^{-1}(x) = \pm\sqrt{x}$$