



Determine and verify inverse functions

1

What is the result of $b(r(x))$?

given :

$$b(x) = r^{-1}(x)$$

what is $b(r(x))$

A

$$x^2$$

B

$$\frac{1}{x}$$

C

$$1$$

D

$$x^{-1}$$

E

$$x$$

2

Is $y(x)$ the inverse of $n(x)$

given:

$$n(x) = 5 \log(-2x + 4)$$

$$y(x) = \frac{10^{\frac{x}{5}} - 4}{-2}$$

A

No

B

Yes

3

Is $z(x)$ the inverse of $n(x)$

given:

$$n(x) = 5\sqrt{2x + 4}$$

$$z(x) = \frac{5x^2}{50} - \frac{4}{2}$$

A

No

B

Yes

4

Find the inverse function of $z(x)$

given:

$$z(x) = (-4x + 5)^2 + 3$$

$$z^{-1}(x) = ?$$

A

$$z^{-1}(x) = \frac{\sqrt{x-3} - 5}{-4}$$

B

$$z^{-1}(x) = \sqrt{\frac{-4x-3}{5}}$$

5

Find the inverse function of $m(x)$

given:

$$m(x) = 3 \log(2x - 4)$$

$$m^{-1}(x) = ?$$

A

$$m^{-1}(x) = \frac{10^{\frac{x}{3}} - 2}{3}$$

B

$$m^{-1}(x) = \frac{10^{\frac{x}{3}} + 4}{2}$$

6

Is $b(x)$ the inverse of $y(x)$

given:

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

$$b(x) = \frac{x^2}{32} - \frac{3}{2}$$

A

Yes

B

No

**Determine and verify inverse functions****7**Find the inverse function of $d(x)$

given:

$$d(x) = -4\sqrt{-5x}$$

$$d^{-1}(x) = ?$$

A

$$d^{-1}(x) = \frac{x}{-80}$$

B

$$d^{-1}(x) = \frac{x^2}{-80}$$

8Find the inverse function of $c(x)$

given:

$$c(x) = -3 \ln(2x + 4)$$

$$c^{-1}(x) = ?$$

A

$$c^{-1}(x) = \frac{e^{\frac{x}{-3}} - 4}{2}$$

B

$$c^{-1}(x) = \frac{e^{\frac{x}{2}} - 4}{-3}$$

9Is $c(x)$ the inverse of $m(x)$

given:

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

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

A No

B Yes

10Find the inverse function of $m(x)$

given:

$$m(x) = -5x^2$$

$$m^{-1}(x) = ?$$

A

$$m^{-1}(x) = -\sqrt{\frac{x}{-5}}$$

B

$$m^{-1}(x) = \sqrt{\frac{x}{-5}}$$

11Is $d(x)$ the inverse of $r(x)$

given:

$$r(x) = 3\sqrt{-2x}$$

$$d(x) = \frac{x^2}{-18}$$

A Yes

B No