



Functions - Composition and Inversion

Intro

- 1 What part of this composite function is $m(x)$?

given $p(m(x))$

$m(x)$ is the ?

A input function

B output function

- 2 What part of this composite function is the input function?

given $c(r(x))$

input function is?

A

$c(x)$

B

$r(x)$

- 3 What part of this composite function is $m(x)$?

given $y(m(x))$

$m(x)$ is the ?

A outer function

B inner function

- 4 What part of this composite function is the outer function?

given $m(r(x))$

outer function is?

A

$m(x)$

B

$r(x)$

- 5 What part of this composite function is $y(x)$?

given $n(y(x))$

$y(x)$ is the ?

A second function

B first function

- 6 What part of this composite function is the first function?

given $n(b(x))$

first function is?

A

$b(x)$

B

$n(x)$

- 7 Find the composite function of $z(m(x))$?

A
$$z(m(x)) = \frac{-2}{-5(1 \cdot x + 4)}$$

B
$$z(m(x)) = 1 \cdot \left(\frac{-2}{-5x}\right) + 4$$

- 8 Find the composite function of $b(z(x))$?

A
$$b(z(x)) = 3 \cdot (1 \cdot x - 3)^2$$

B
$$b(z(x)) = 1 \cdot (3 \cdot x^2) - 3$$



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9 Find the composite function of $y(m(x))$?

A

$$y(m(x)) = -2^{2(-1 \cdot x^2)}$$

B

$$y(m(x)) = -1 \cdot (-2^{2x})^2$$

10 Which set describes the domain of this function composition?

A

$$\{X \in \mathbb{R} | 1 \leq X\}$$

B

$$\{X \in \mathbb{R} | X \leq 1\}$$

11 Which number line shows the domain of this function composition?

A



B



12 Which set describes the domain of this function composition?

A

$$\{X \in \mathbb{R} | 4 < X < 4 \text{ or } 4 < X < 4\}$$

B

$$\{X \in \mathbb{R} | X < 4 \text{ or } 4 < X\}$$

13 Which set describes the domain of this function composition?

A

$$\{X \in \mathbb{R} | 0 < X\}$$

B

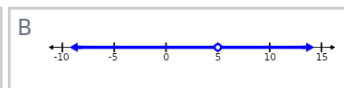
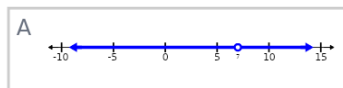
$$\{X \in \mathbb{R} | 0 \leq X \leq 2\}$$



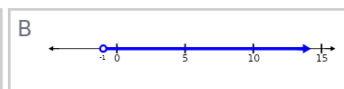
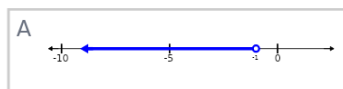
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14 Which number line shows the domain of this function composition?



15 Which number line shows the domain of this function composition?





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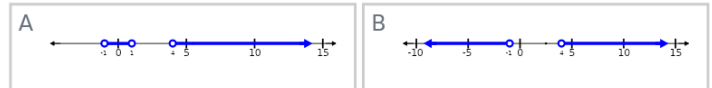
16 Which set describes the domain of this function composition?

- A $\{X \in \mathbb{R} : X < -2 \text{ or } 0 < X\}$ B $\{X \in \mathbb{R} : -2 < X < 2 \text{ or } -1 < X < 1\}$

17 Find the inverse function of $y(x)$

- A $y^{-1}(x) = \frac{x+4}{2}$ B $y^{-1}(x) = \frac{2+4}{x}$

18 Which number line shows the domain of this function composition?



19 What is the result of $z(r(x))$?
given :

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

what is $z(r(x))$

- A x B x^{-1} C x^2
D $\frac{1}{x}$ E 1

20 Is $b(x)$ the inverse of $m(x)$?

$$b(m(x)) = 1$$

- A No B Yes

**Functions - Composition and Inversion - Intro****21** Is $r(x)$ the inverse of $b(x)$

A

Yes

B

No

22 Find the inverse function of $p(x)$

A

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

B

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

23 Is $y(x)$ the inverse of $d(x)$

A

No

B

Yes