These cards help review:

1. Functions
2. Function Notation
3. Inverses
4. Domain

What are the steps for computing the inverse of a function when given an EQUATION?

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0. Write the given equation in "y=" form
1. Switch x & y.
2. Solve for y.
3. Write the appropriate inverse notation.

Which of the following notations yield the same result?

$f(g(x))$ $g(f(x))$ $(g \circ f)(x)$

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When given an equation called f(x) and you are asked to compute f(3), what do you do?

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1. Take 3
2. Use it as an input in f(x)
3. Simplify to compute the output.

When given two equations called f(x) and g(x), describe how to compute f(g(2)).

When given two equations called f(x) and g(x), describe how to compute f(g(2)).

1. Take 2.
2. Use it as an input for x in g(x)
3. Simplify to compute the output.
4. Use that output as the input for f(x)
5. Simplify.

Do the inner function first!!!!

What are the steps for computing the inverse of a function when given a set of ordered pairs?

What are the steps for computing
the
inverse
of a function
when given a
set of ordered pairs?

Simply
switch x & y
for each of the ordered pairs.

If you were given two equations called f(x) and g(x), how could you determine if they were inverses of each other?

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Compute (f o g)(x) and (g o f)(x).
If you get x for both as your answer, then
f(x) and g(x)
are inverses of each other.

This is sometimes called "verifying inverses through composition."

Suppose you are given a graph of a function called f(x), how could you determine f(8)?

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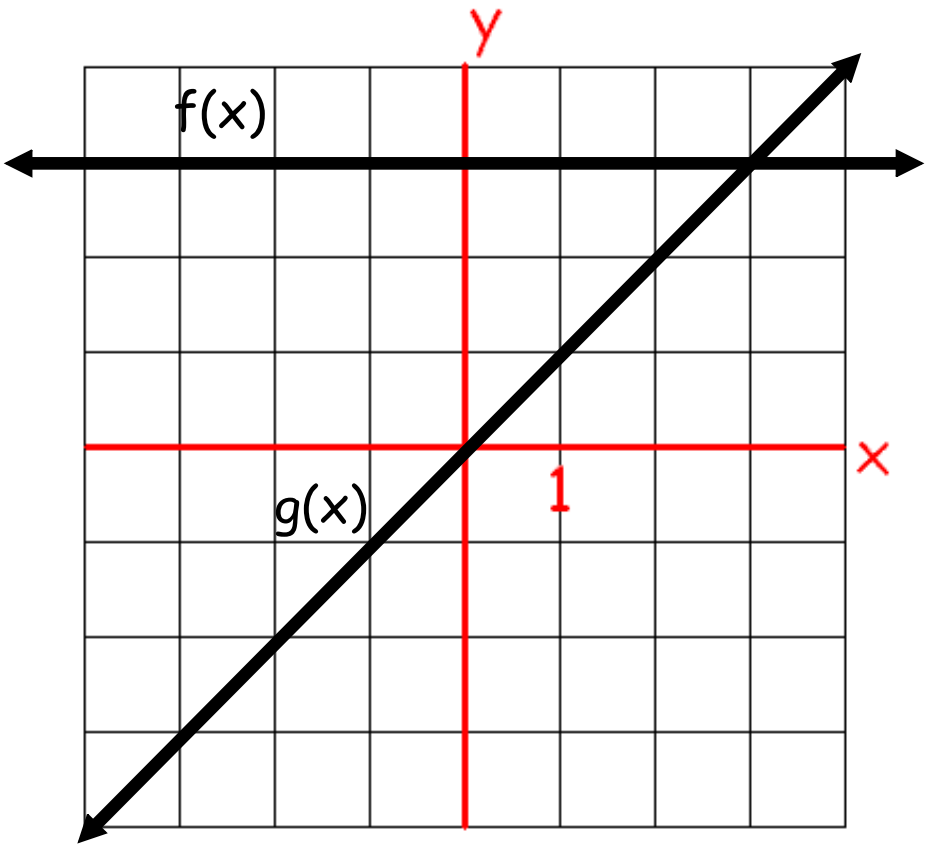
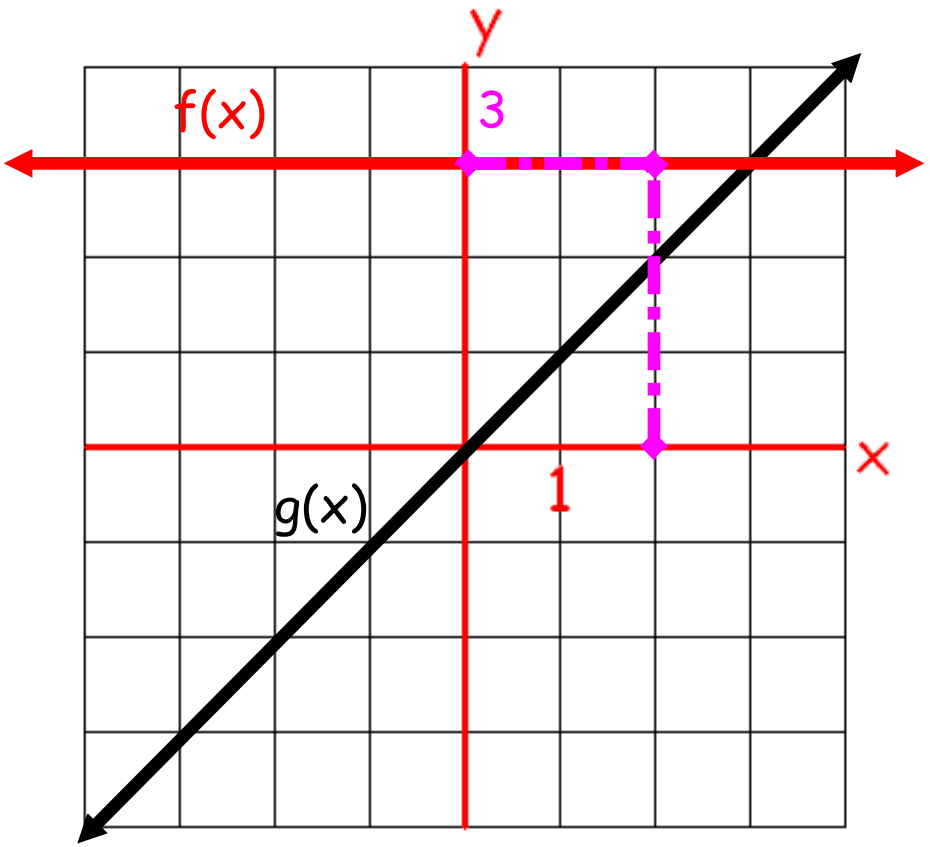
1. Go to 8 on the x-axis.
2. Draw a vertical line to hit the graph of f(x).
3. Read the y-coordinate of the point that you hit.

Given the graph below, what is f(2)?

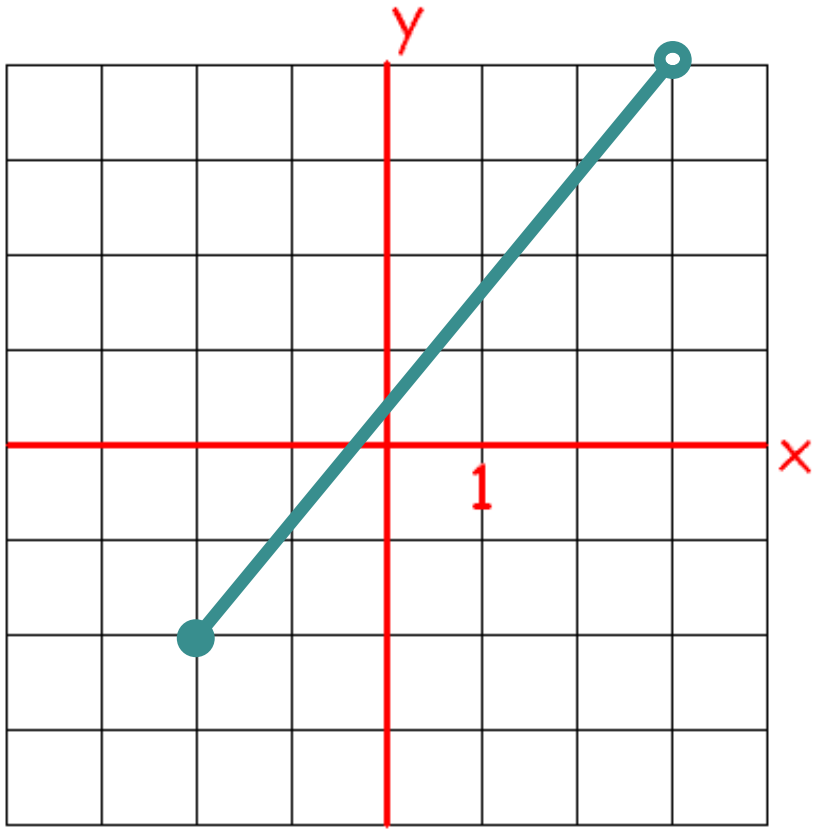


Given the graph below, what is f(2)?

f(2)=3



Which is the domain of the following?



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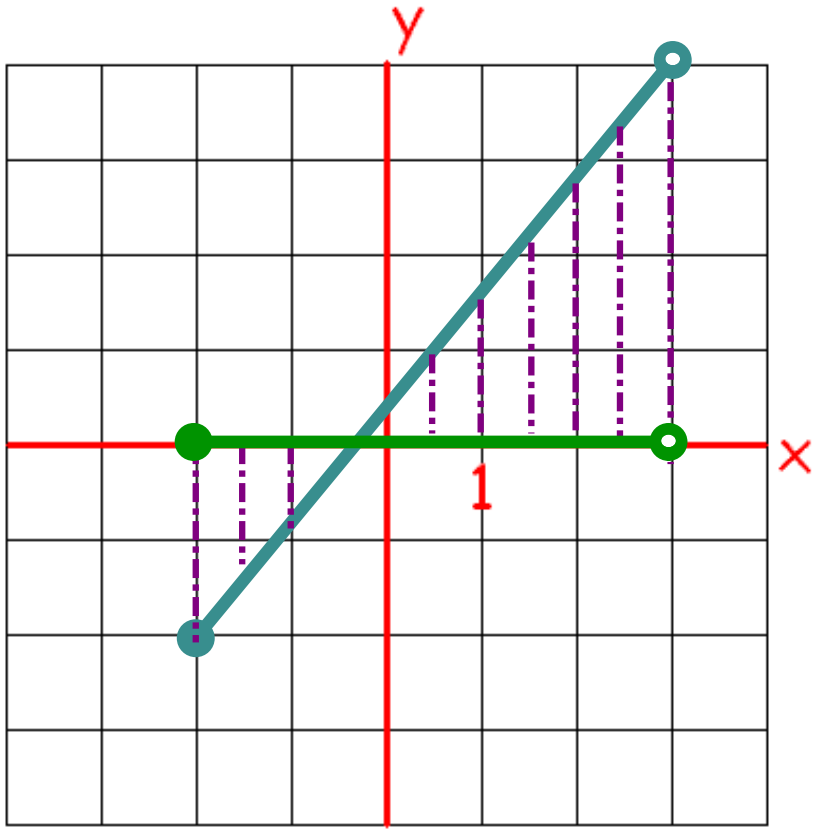

D:[-2,3)

or

$-2 \leq x < 3$

Which of the following notations yield the same result.

$(g \circ r)(x)$ $g(r(x))$ $(r \circ g)(x)$

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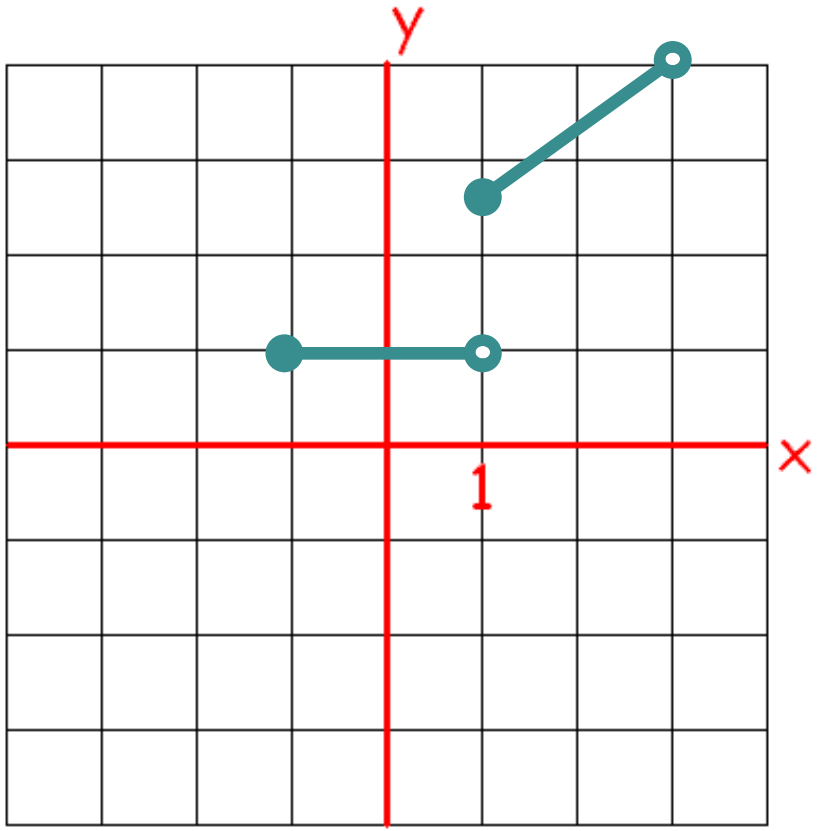

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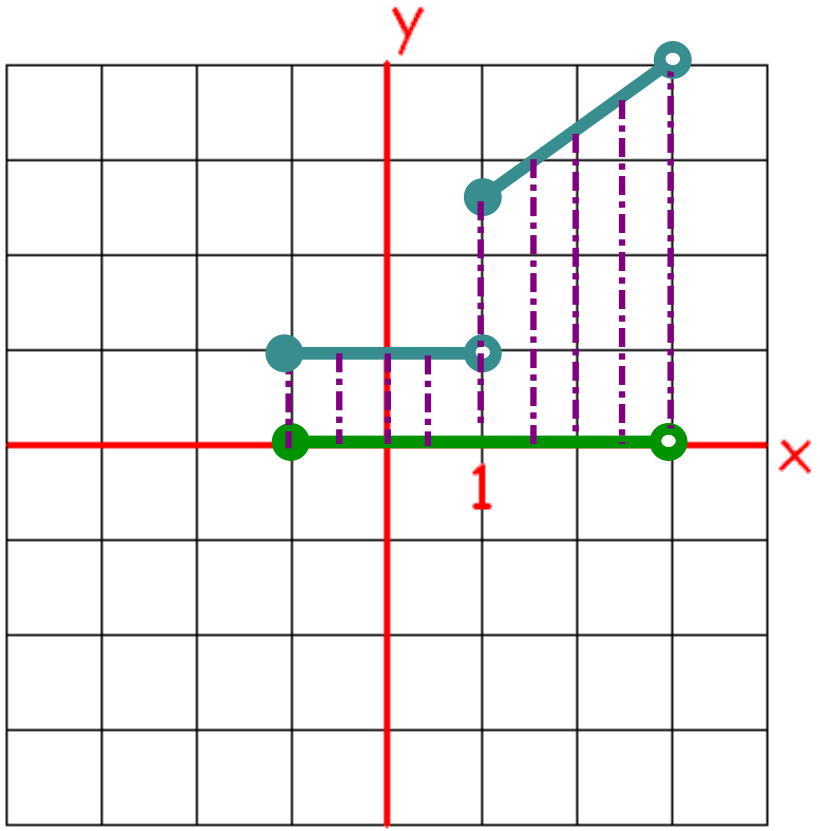

D:[-1,3)

or

$-1 \leq x < 3$

How is the following notation read?

$$f(g(x))$$

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$$f(g(x))$$

"f of g of x" or "f at g at x"

How is the following notation read?

$$(g \circ h)(x)$$

How is the following notation read?

$$(g \circ h)(x)$$

"g composed with h at x"

Consider $f(x)=2x-7$ and $g(x)=3x-9$

True or False

The following is the appropriate set-up for computing $(f-g)(x)$

$$2x-7 - 3x-9$$

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True or False

The following is the appropriate set-up for computing $(f-g)(x)$

$$2x-7-(3x-9)$$

You must use parentheses
when subtracting functions.

What is the restriction on the domain of the following function?

$$f(x)=\frac{2x-9}{x+2}$$

What is the restriction on the domain of the following function?

$$f(x)=\frac{2x-9}{x+2}$$

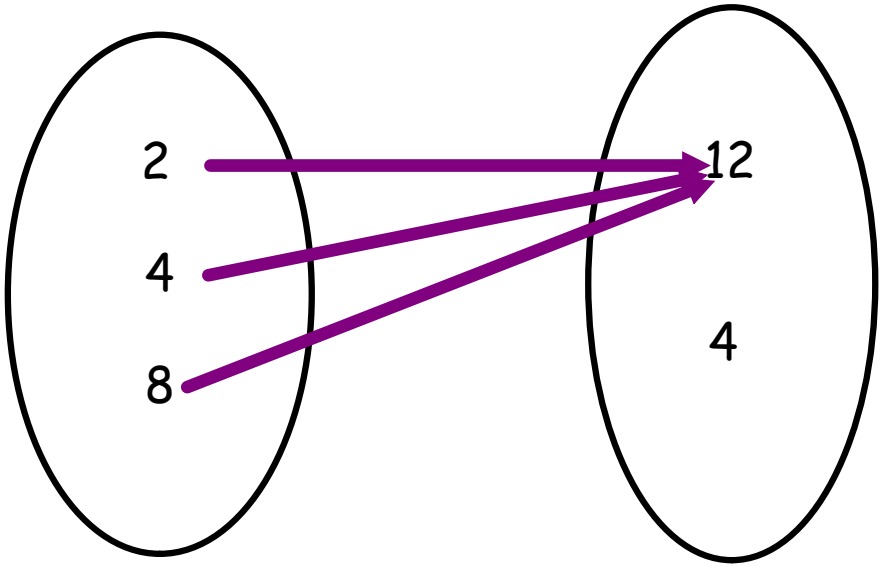
$x+2=0$

$-2 \quad -2$

Because the denominator cannot be zero $\longrightarrow x \neq 2$

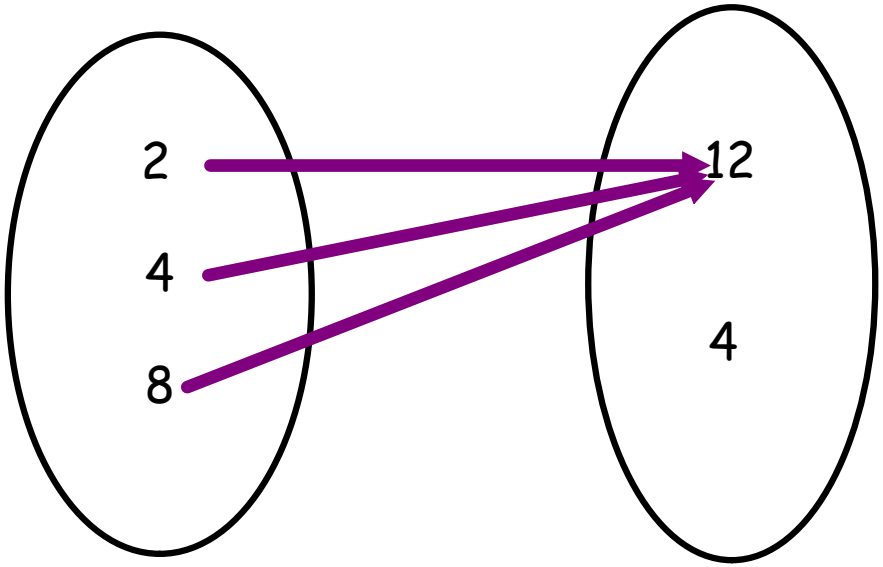
True or False

The following is a function.



True or False

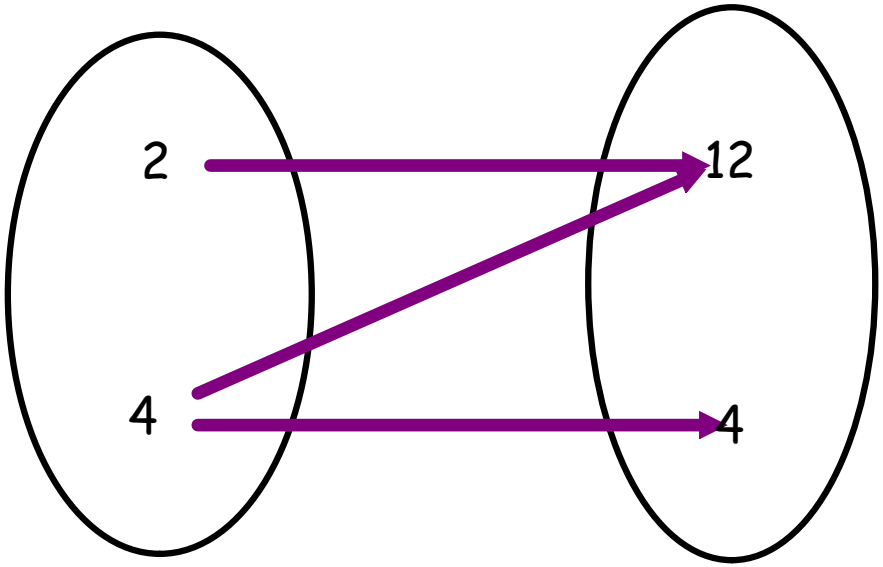
The following is a function.



All elements of the domain are mapped to one element in the range.

True or False

The following is a function.



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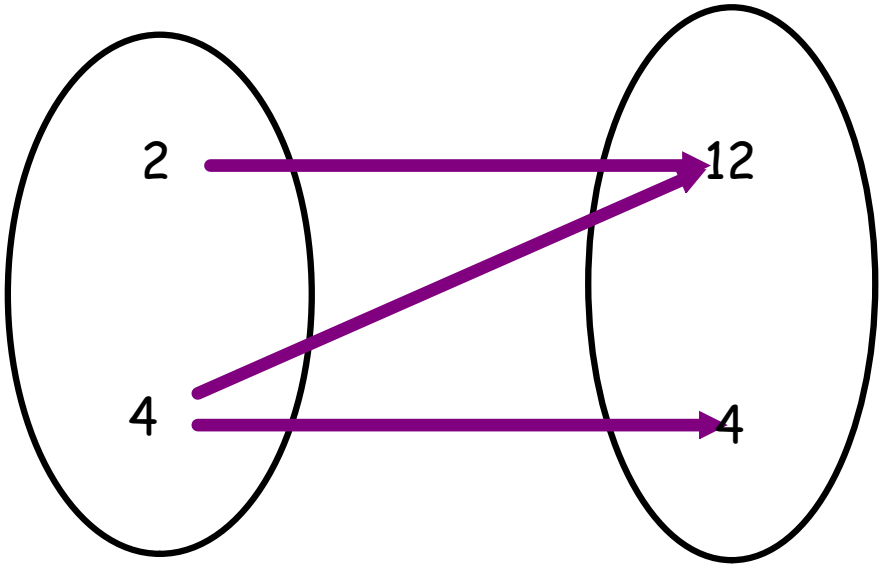

Not a function because....

An element of the domain is mapped to two elements in the range.

What are the steps for computing the inverse of a function when given a graph?

What are the steps for computing the inverse of a function when given a graph?

Reflect the graph through y=x.

or

1. Take a bunch of punch off the graph
2. Switch and x & y
3. Re-graph the new points.