

1.07 NOTES – Inverses

Example One:

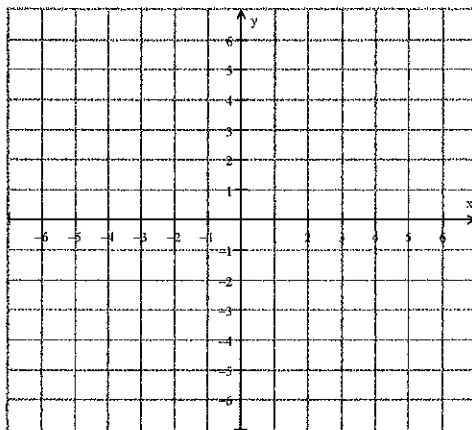
1. Graph the linear parent function $y = x$ using a dotted line
2. Graph $f(x) = 2x+1$ by coming up with a table of ordered pairs.

Original

x	y

Inverse

x	y



3. Graph the inverse using its table of ordered pairs.

Example Two:

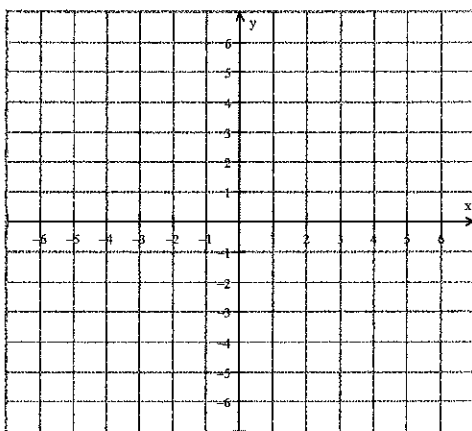
1. Graph the linear parent function $y = x$ using a dotted line
2. Graph $f(x) = 2$ by coming up with a table of ordered pairs.

Original

x	y

Inverse

x	y



3. Graph the inverse using its table of ordered pairs.

Conclusion: What do you notice about the relationship between the ordered pairs of a function and the ordered pairs of its inverse?

Ordered pairs –

Graphically –

Steps to find an inverse algebraically:

1.

2.

Example Three: Find the inverse of the function algebraically.

a) $f(x) = 2x + 4$

b) $g(x) = 6x$

c) $h(x) = \frac{3}{5}x - 2$

d) $f(x) = 6$

Name: _____

1.7 Inverses – HOMEWORK

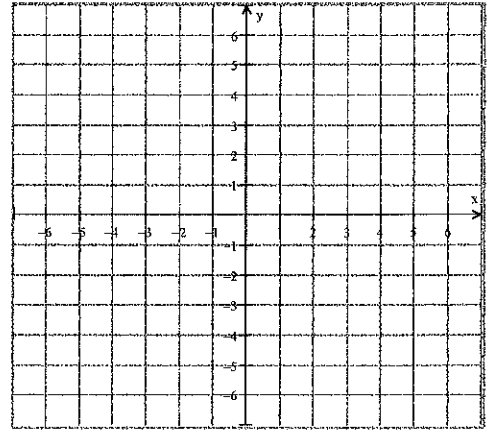
1. a) Graph the linear parent function $y = x$ using a dotted line
 b) Graph $y = -3x - 6$ by coming up with a table of ordered pairs.

Original

Inverse

x	y

x	y



- c) Graph the inverse using its table of ordered pairs.

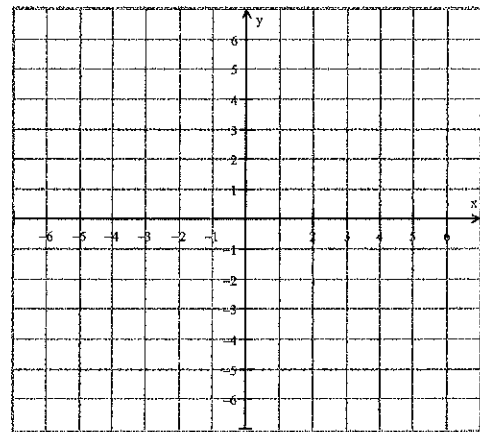
2. a) Graph the linear parent function $y = x$ using a dotted line
 b) Graph $y = \frac{2}{3}x + 2$ by coming up with a table of ordered pairs.

Original

Inverse

x	y

x	y



- c) Graph the inverse using its table of ordered pairs.

3. Find the inverse of each relation. $\{(7,5), (2,6), (8,3), (7,8)\}$ _____

a) Is the original relation a function? Explain.

b) Is the inverse a function? Explain.

4. Find the inverse of each relation. $\{(0,3), (4, 2), (5,-6), (7,3)\}$ _____

a) Is the original relation a function? Explain.

b) Is the inverse a function? Explain.

5. $f(x) = x - 1$

6. $h(x) = \frac{1}{4}x + 2$

7. $f(x) = 5$

8. $h(x) = -3x$

9. $h(x) = 6x - 2$

10. $g(x) = 5x - 5$