URL: http://www.mathwarehouse.com/algebra/relation/one-to-one-function.php

Worksheet on next page

Is the following relation a function ?

(2,9) , (4,5) , (11,5)

Model Problems

1) Which functions below are one to one ?

Function #1 { (2,27), (3,28), (4,29), (5,30) }

Function #2 { (11,14), (12,14) , (16,7), (18,13) }

Function #3 { (3,12), (4,13), (6,14), (8,1) }

2) Which functions below are one to one ?

Function #1 { (2,1), (4,5), (6,7), (8,9) }

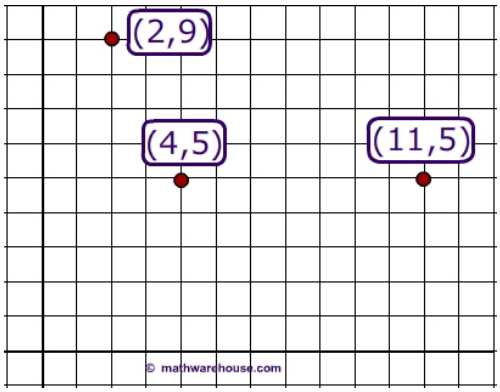
Function #2 { (3,4), (8,5), (6,7), (22,4) }

Function #3 { (-3,4), (21,-5), (0,0), (8,9) }

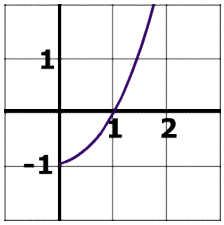
Function #4 { (9, 19), (34,5), (6,17), (8,19) }

The horizontal Line Test

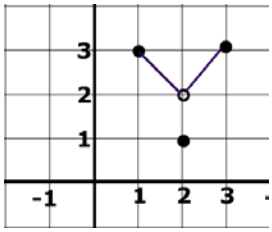
3)



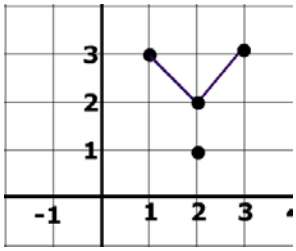
4)



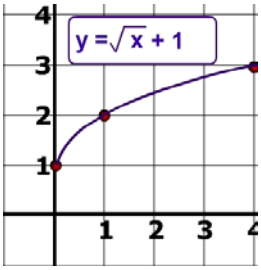
5)



6)



7)



Class Practice

1) Is the function below one-to-one?

2) For the following function to be one-to-one, X can not be what values?

{ (8, 11), (34,5), (6,17), (12 ,X) }

3) For the following function to be one-to-one, X can not be what values?

{ (21, 22), (22,15), (111,113), (12 ,X) }

Determine if the relations below are functions, one-to-one functions or neither

4) $y = -2x + 4$

5) $y + x = 2$

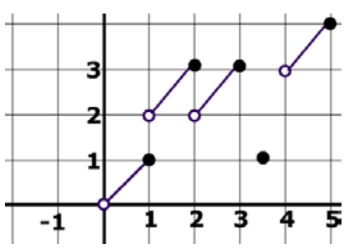
6) $y = |x|$

7) { (1, 2), (2,3), (3,4), (5,6), (7,8)) }

8) $\frac{y}{x} = 1$

9) $x = y^2 + 5$

10)



Group Members:

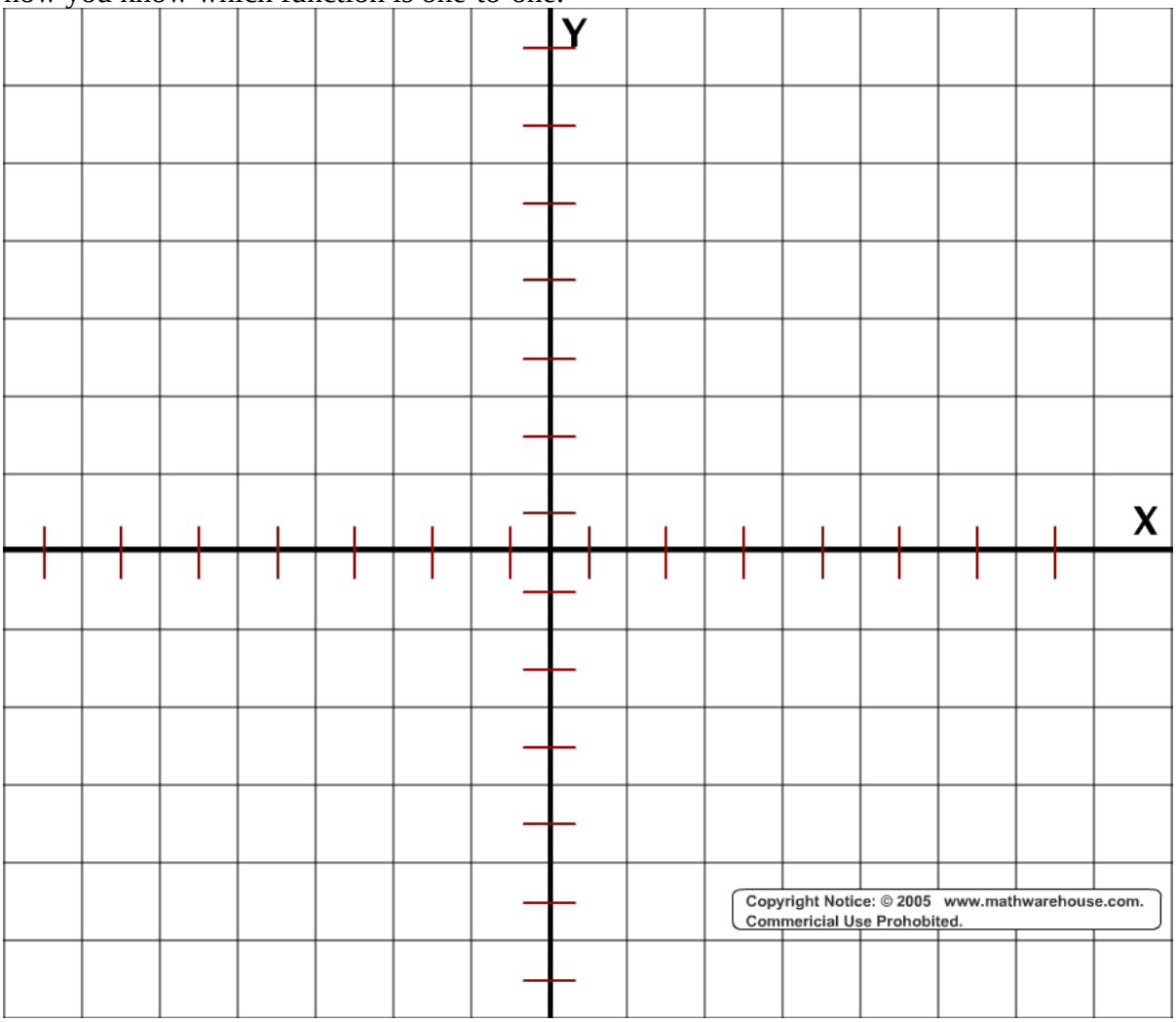
Activity

Task #1) Make up a function that is **not** one to one has at least 6 ordered pairs.
Function that is not one-to-one:

Task #2) Make up a function that is one to one has at least 6 ordered pairs.
Function that is one-to-one:

Task #3) Using two different colors**,** plot the two relations that you made up.

Task #4) Perform the Vertical Line and Horizontal Line Tests on both graphs and explain how you know which function is one-to-one.



Homework

Classify the equations below as functions, one to one functions or neither

1) $y = |x + 1|$

2) $x = 5$

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

4) $3x^2 + 4y^2 = 121$

5) $3x^2 + 3y^2 = 121$

6) $x = y^2 + 1$