21 MAR 2012

1st 5

Determine if each relation is a function.

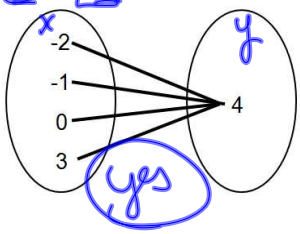
1) {(-2,3), (4,-5), (-5,3), (2,4), (-1, -2)} yes

2) {(3,6), (-4,3), (2,3), (3,4), (-4,4)} NO

3)

x	y
1	2
0	-3
-2	-3
1	-2

NO

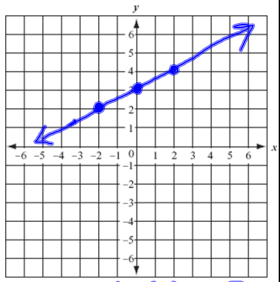
4) 

Relations and Functions Day 4

- Three Views of a Function
  - Model the function rule y = ½ x + 3 using a table of values and a graph.

x	y = ½ x + 3	(x, y)
-2	y = 2	(-2, 2)
0	y = 3	(0, 3)
2	y = 4	(2, 4)

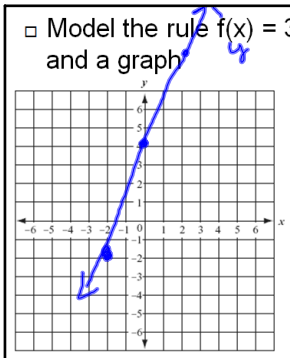
y = ½(-2) + 3
-1 + 3 = 2
y = ½(0) + 3
0 + 3 = 3



y = ½(2) + 3
1 + 3 = 4

Relations and Functions Day 4

- Model the rule f(x) = 3x + 4 with a table of values and a graph



x	f(x) = 3x + 4	(x, y)
-2	f(-2) = -2	(-2, -2)
0	f(0) = 4	(0, 4)
2	f(2) = 10	(2, 10)

f(-2) = 3(-2) + 4
-6 + 4
-2

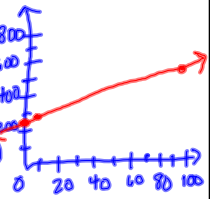
f(0) = 3(0) + 4
0 + 4
4

f(2) = 3(2) + 4
6 + 10

Relations and Functions Day 4

Suppose your group recorded a CD. Now you want to copy and sell it. One company charges $250 for making a master CD and designing the art for the cover. There is also a cost of $3 to burn each CD. The total cost *P(c)* depends on the number of CDs *c* burned. Use the function rule P(c) = 250 + 3c to make a table of values and a graph.

c	P(c) = 250 + 3c	(c, P(c))
0	P(0) = 250	(0, 250)
10	P(10) = 280	(10, 280)
100	P(100) = 550	(100, 550)



250 + 3(10)
250 + 30
280

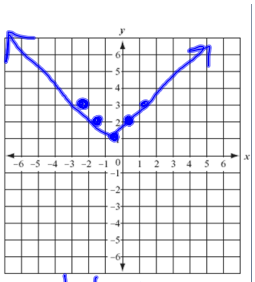
Relations and Functions Day 4

- Graphing Function
  - Graph the function y = | x | + 1

x	y = |x| + 1	(x,y)
-2	y = 3	(-2, 3)
-1	y = 2	(-1, 2)
0	y = 1	(0, 1)
1	y = 2	(1, 2)
2	y = 3	(2, 3)

y = |-2| + 1
2 + 1 = 3

y = |-1| + 1
1 + 1 = 2



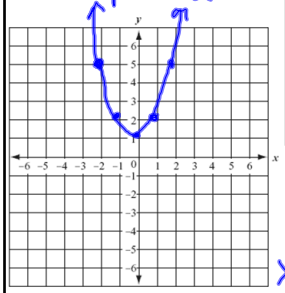
y = |0| + 1
0 + 1 = 1

y = |1| + 1
1 + 1 = 2

Relations and Functions Day 4

- Graph the function f(x) = x² + 1

parabola



x	f(x) = x² + 1	(x, f(x))
-2	f(-2) = 5	(-2, 5)
-1	f(-1) = 2	(-1, 2)
0	f(0) = 1	(0, 1)
1	f(1) = 2	(1, 2)
2	f(2) = 5	(2, 5)

f(-2) = (-2)² + 1
4 + 1 = 5

x	y	(x, y)

Relations and Functions Day 4

PW 21

Reteaching 5-3 and Practice 5- 3 # 1 – 9, 12, 14

Relations and Functions Day 4