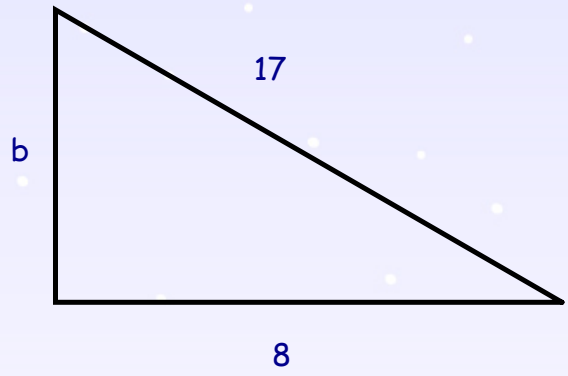
Quiz Prep . . .

$17^2 = 289$



$b^2 + 8^2 = 17^2$

$b^2 + 64 = 289$

$-64 \quad -64$

$b^2 = \sqrt{225}$

$b = 15$

Can the following be sides of a right triangle?

5, 8, and 13

NO.

$5^2 + 8^2 \stackrel{?}{=} 13^2$

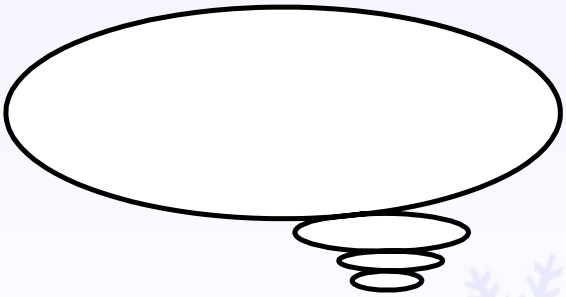
$25 + 64$

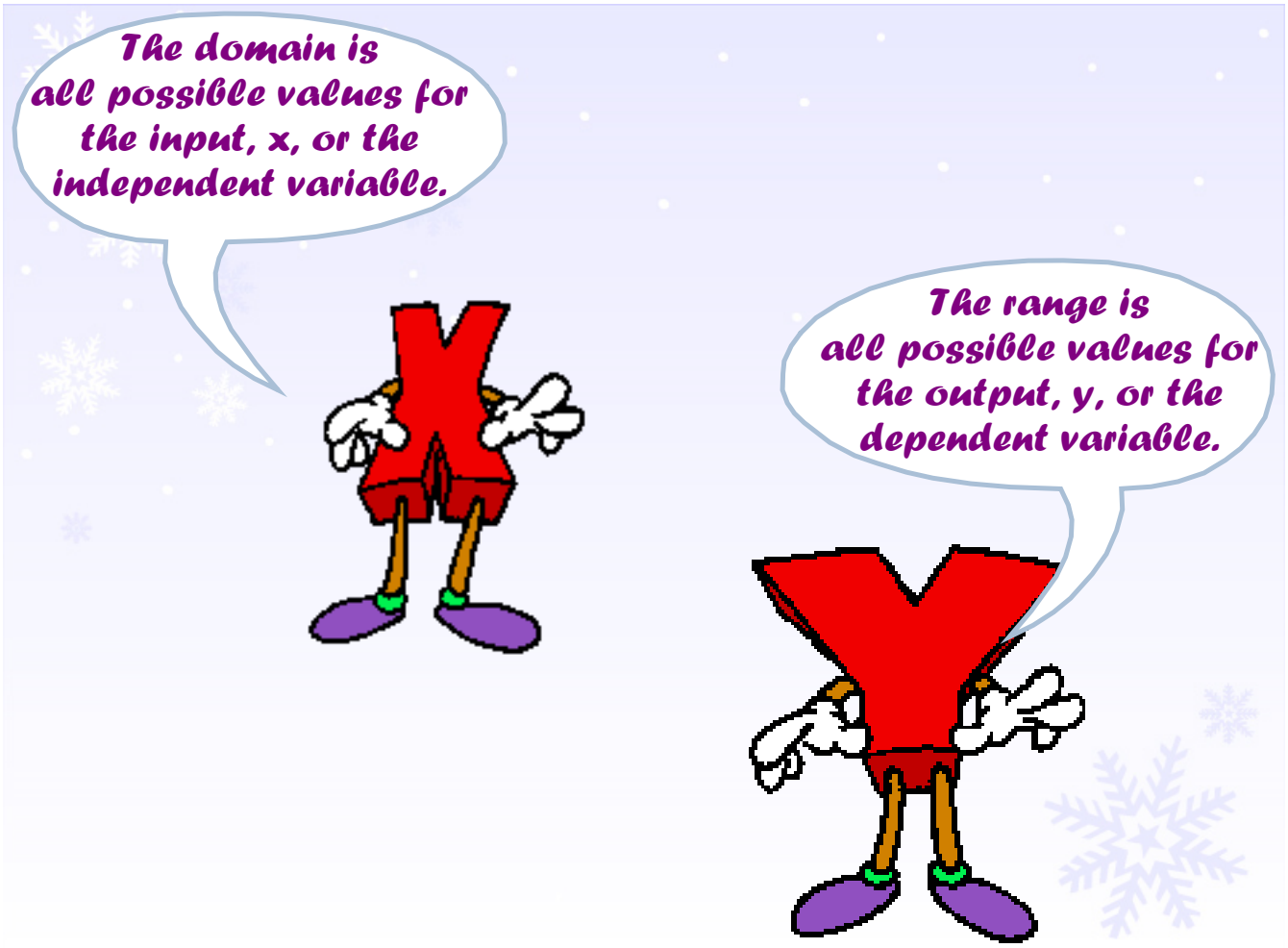
$89 \neq 169$

Homework Questions -
p. 254 (1 - 12, 15, 16)

Section 5.2
Relations and Functions

Remember in Section 1.4 that . . .




The domain is all possible values for the input, x, or the independent variable.
X
The range is all possible values for the output, y, or the dependent variable.
Y

Adding on to that . . .

. . . a relation is a set of ordered pairs.

Determine if a relation is a function.

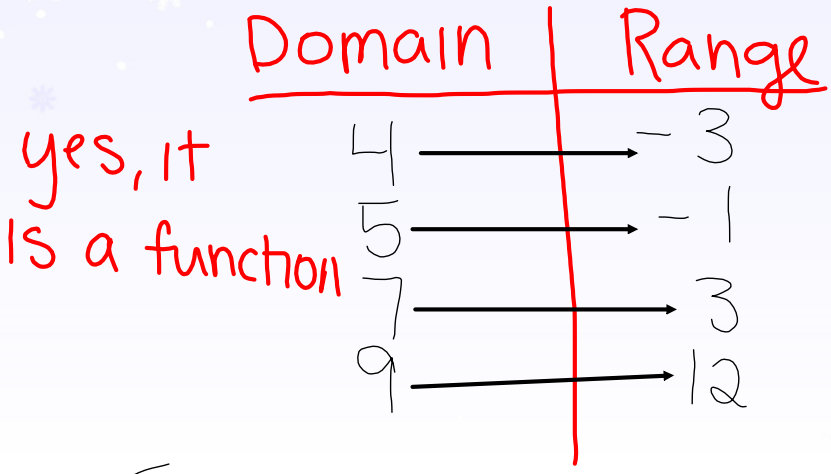
$(3,-1)$

$(-2,4)$

(x,y)

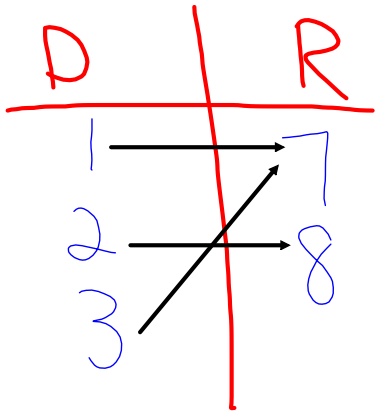
Using a mapping diagram to determine if a relation is a function . . .

① $\{(4,-3),(5,-1),(7,3),(9,12)\}$



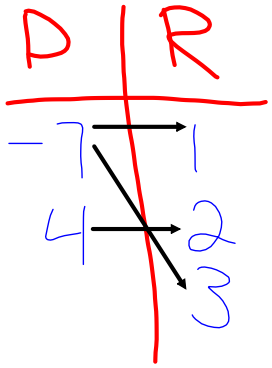
yes, it is a function

② $\{(3,7),(2,8),(1,7)\}$

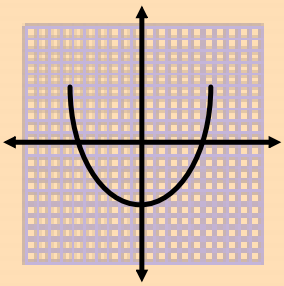


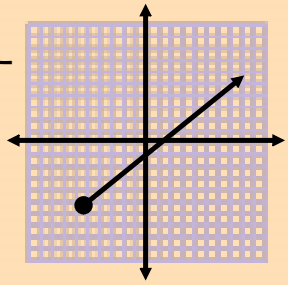
yes a function

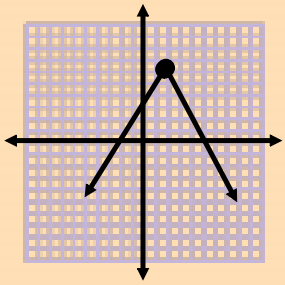
③ $\{(-7,3),(4,2),(-7,1)\}$

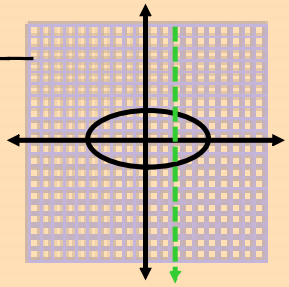


Not a Function

A.____ 

B.____ 

C.____ 

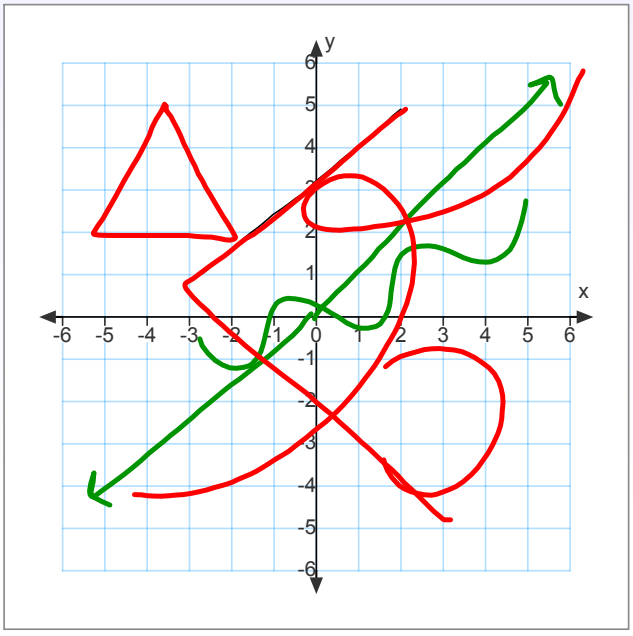
D.____ 

Or, use the vertical line test

if a vertical line intersects a line @ more than one point ≠ Function

—— = yes

—— = No



Evaluating Functions . . .

$f(x) = 3x - 4$

$f(2) = 3(2) - 4$

$= 2$

$\boxed{f(2) = 2}$

② $f(x) = -|x| - 3$

$D: \{-4, 3\}$

$f(-4) = -|(-4)| - 3$

$-4 - 3$

$f(-4) = -7$

$f(3) = -|(3)| - 3$

$f(3) = -6$

$D: \{-4, 3\}$ $R: \{-7, -6\}$

$f(x) = -x^2 - 1$

$f(-2) = -(-2)^2 - 1$

$-4 - 1$

$f(-2) = -5$

Homework (to be handed in):

p. 259 (1 - 35 odd, 41)

(9)

x	x + 7	y
1	1 + 7	8
2	2 + 7	9
3	3 + 7	10
4		