

- check assignment

- 1 The sum of 42 and a #  $n$  is 51  $42+n=51$
- 2 The difference of  $z$  and 11 is greater than 16  $z-11 > 16$
- 3 The sum of  $n$  and 4 is less than or equal to 13  $n+4 \leq 13$
- 4 The quotient of  $t$  and 4.2 is at least 33  $\frac{t}{4.2} \geq 33$
- 
- 1  $9+4y=17; y=1$  Not a solution
- 2  $\frac{k}{5}+9=11; k=10$  Solution
- 3  $2p-1 \geq 7; p=3$  Not a solution
- 4  $y-3.5 < 6; y=9$  solution

### 1.6 Functions

• Pattern or table of #'s

1 gallon of gas = \$2.70

gal (x)	1	5	10	21	called Domain (x) - set of inputs (put in)
Cost (y)	2.70	13.50	27	56.70	called Range (y) - set of outputs (# put out)

$$\text{Cost} = 2.70 * \text{gal}$$

$$\text{or } y = 2.70x$$

Note: Functions each input matches only 1 output  
(x) (y)

Input	Output
1	0
2	1
3	2
4	2

x	y
1	3
1	10
2	4
5	12

$$x+4=y$$

x	y
0	
1	
2	
3	
-1	

Yes!

$$x^2 = y$$

x	y
-2	
-1	
0	
1	
2	

Yes!

Function?  
or not?

Yes!

Nope!  
1 has both 3 & 10

Follow rule to get

Remember:

Domain = input = independent variable =  $x$

Range = output = dependent variable =  $y$

Find the rule / pattern ...

Input	0	1	4	6	10
Output	2	3	6	8	12

← What do you do to  $x$  to get  $y$ ?  
(add 2 ...)

Rule:  $x + 2 = y$

Example

Find the range

a)  $y = x - 3$

D: 12, 15, 22, 30

~~x | y~~

b)  $y = 3x + 4$

D: -1, 0, 5, 10

x | y

p 38: 3, 7, 12-15, 19