Name: _____

Chapter 5 Review

1. The table below shows English words and the number of letters in the word.

Words	Letters
Dog	3
Horse	5
Elephant	8
Pig	3

a) Represent the relation as a set of **ordered pairs**.

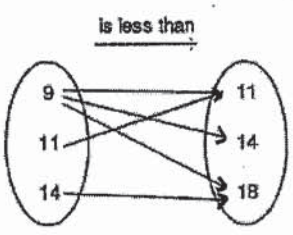
b) Represent the relation as an **arrow diagram**.

c) Write the **domain** and **range**.

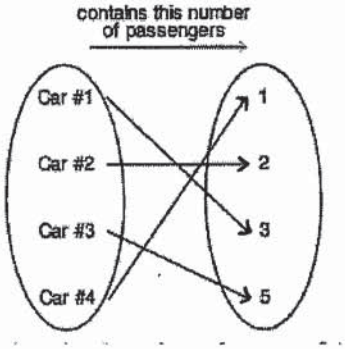
d) Is this relation a **funciton**? Explain why or why not.

2. Which of the following represent a **function**? Justify your answer.

a)



b)



3. Which of the following repersent a **linear** function? Justify your answers.

a) { (5, 10) , (6, 20) , (7, 40) }

b) { (30, 10) , (20, 20) , (10, 30) }

c) { (3, 4) , (2, 4) , (1, 5) }

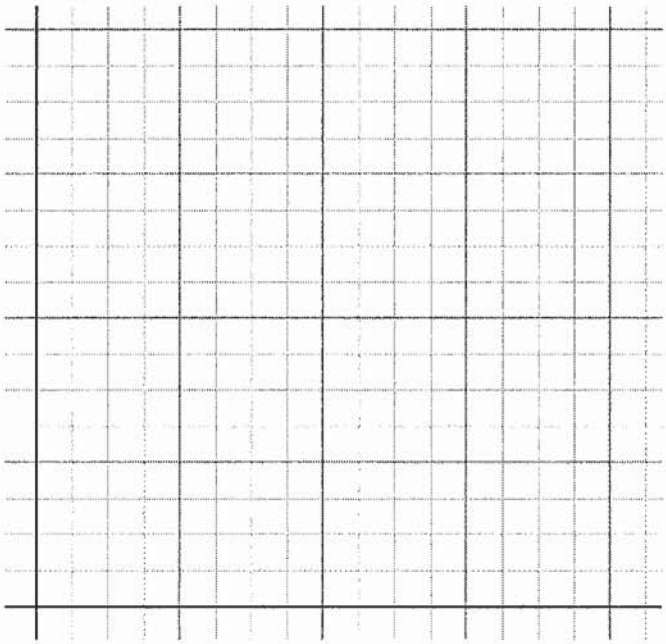
d) { (2, 1) , (2, 2) , (3, 1) , (3, 2) }

4. Given the following table of values:

a) **Graph** the data. **Will you join the points**? Justify your answer.

b) Does the graph represent a **function**? Explain.

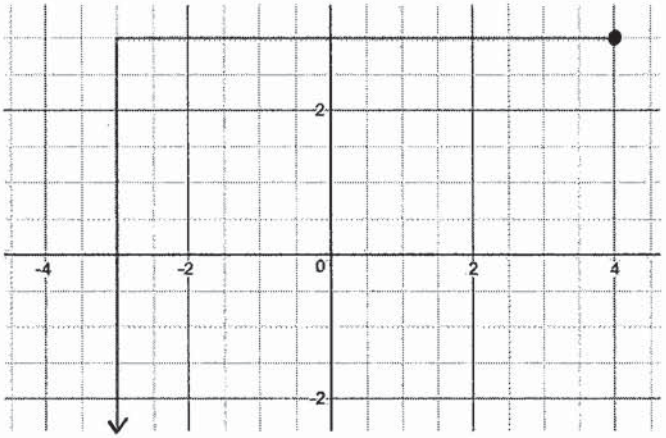
People, n	**Cost, C ($)**
15	0.50
30	1.00
60	2.00
90	3.00
120	4.00



c) State the **domain** and **range** of the relation.

5. Determine the **domain** and **range** of each graph.

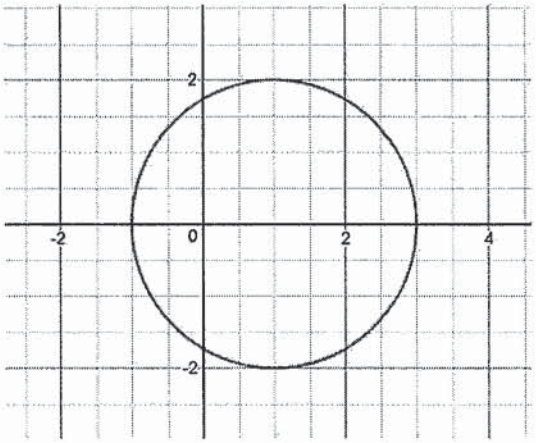
a)



Domain: _____

Range: _____

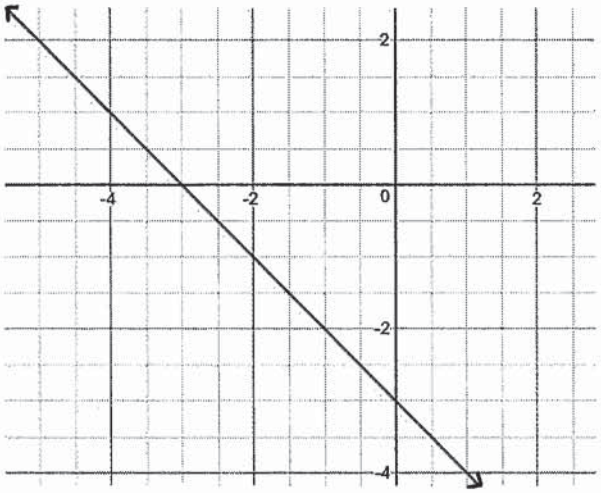
b)



Domain: _____

Range: _____

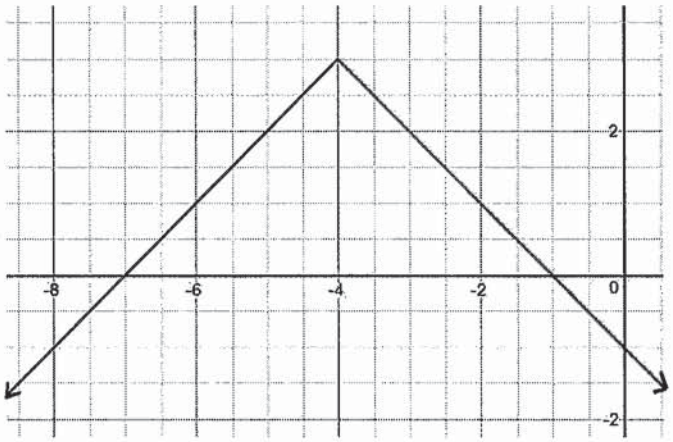
c)



Domain: _____

Range: _____

d)



Domain: _____

Range: _____

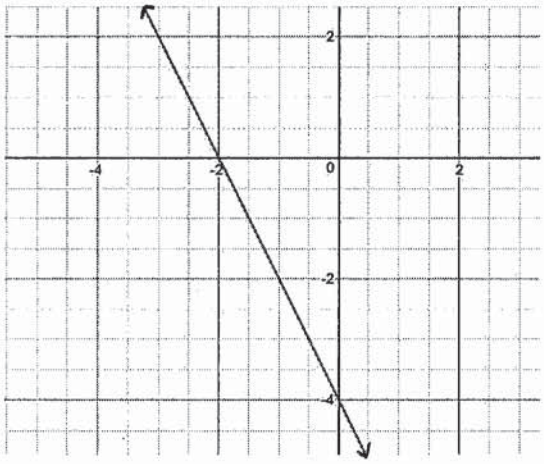
6. Given $y=4x-10$.

a) Write the relation in **function notation**.

b) Find $f(3)$

c) Find the value of x when $f(x)=42$.

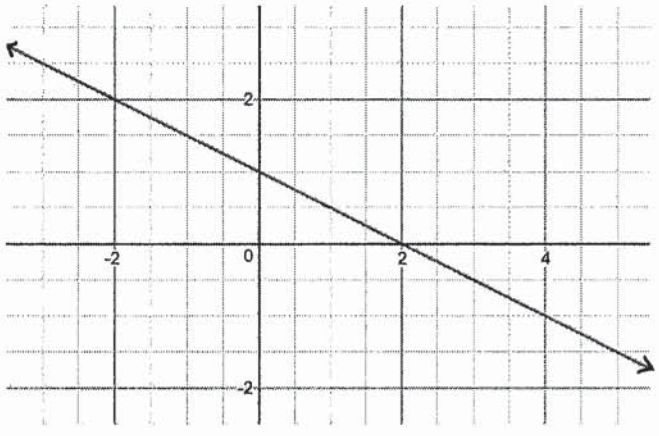
7. Given the graph of the function: $f(x)=-2x-4$.



a) Find the **domain value** when the range value is -2.

b) Find the **range value** when the domain value is -2.

8. Given the graph of the function: $h(x)=-\frac{1}{2}x+1$.



a) Find the **range value** when the domain value is -2.

b) Find the **domain value** when the range value is -1.

9. Given the function $f(x)=-5x+3$; find:

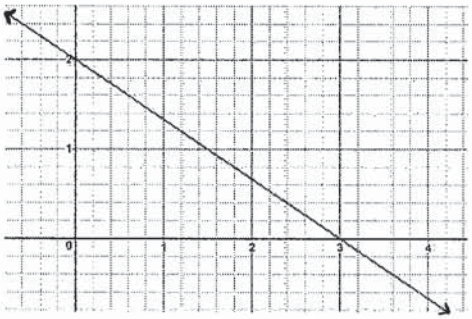
a) $f(2)$ b) $f(-5)$ c) $f(0)$

10. Given the function $f(x)=2+3x$; find the value of x when

a) $f(x)=11$ b) $f(x)=32$ c) $f(x)=-10$

11. Find the x and y **intercepts** for each linear function.

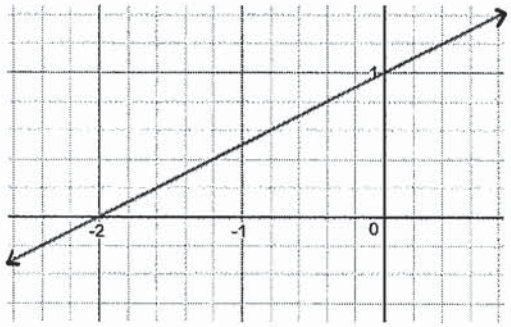
a)



x – intercept : _____

y – intercept: _____

b)



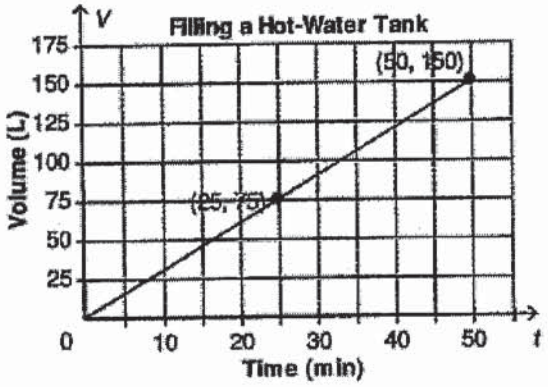
x – intercept : _____

y – intercept: _____

c) $4x+3y=18$

d) $2x-7y=-28$

12. This graph represents a 150-L hot-water tank being filled at a constant rate. Determine the **rate of change** of the relation.



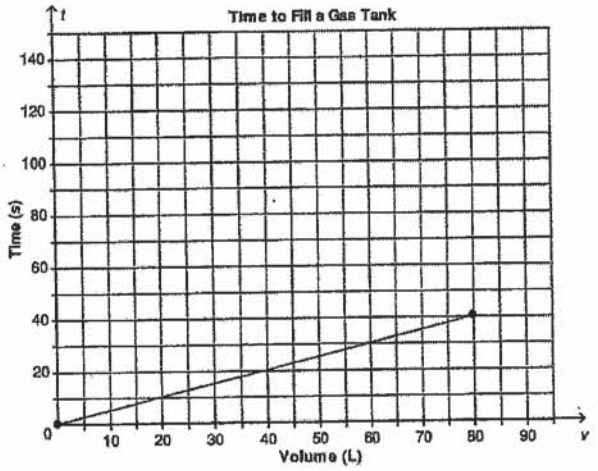
13. The altitude of a plane, a (measured in meters), is related to the time, t (measured in minutes), that has elapsed since it started its descent.

t (min)	a (m)
0	9600
2	8200
4	6800
6	5400
8	4000

a) Determine if the relation is **linear**. Justify your answer.

b) If it is linear, find the **rate of change**.

14. The following graph shows the time it takes to fill a gas tank from empty.



a) Determine the **rate of change**.

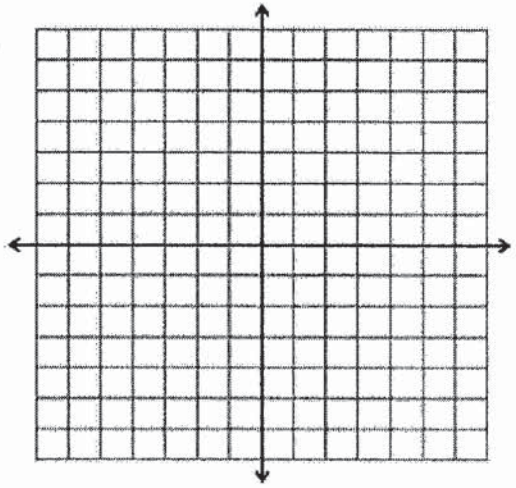
b) Write the **domain** and **range**.

c) About **how long** will it take to fill a 45 – L gas tank?

15. Given $y=3x+5$,

a) Create a **table of values** and graph the function.

x	y



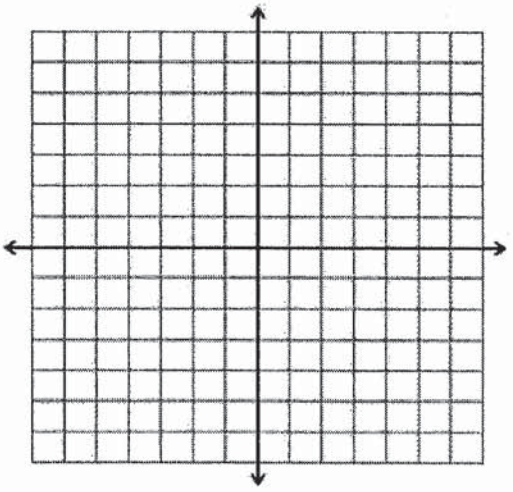
b) What is the **rate of change** of this function?

16. Given $4x+2y=8$,

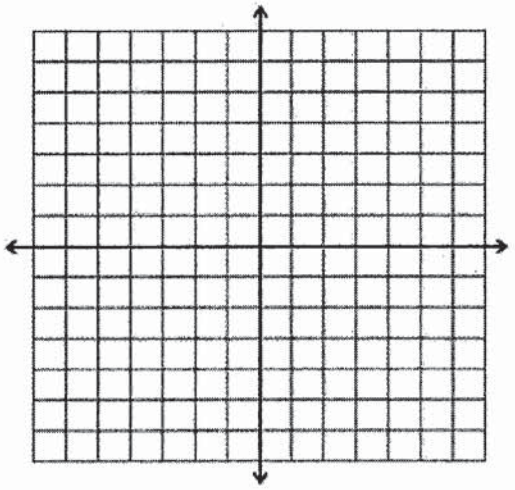
a) **Solve** for the dependent variable (y).

b) Create a **table of values** and graph the function.

x	y



17. Given $3x-2y=12$, find the x and y **intercepts** and use them to **graph** the linear function.



18. Given $-2x-5y=10$, find the x and y **intercepts** and use them to **graph** the linear function.