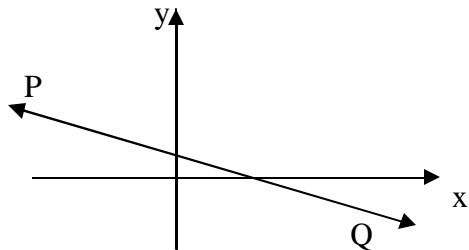


## 3.3 The Slope of a Line

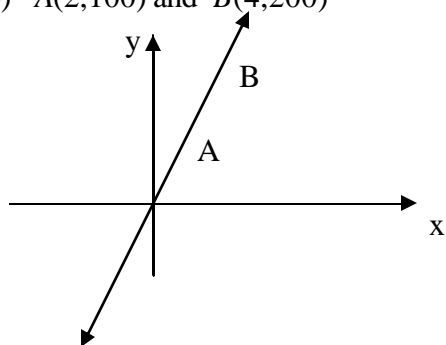
**In class work :** Solve each problem.

1. Compute the slope of the line that passes through the points:

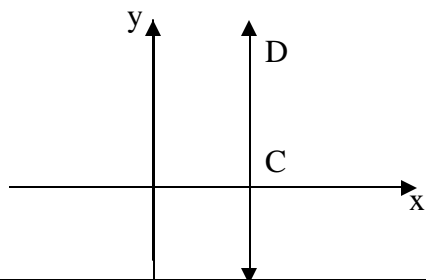
a)  $P(-4,2)$  and  $Q(5,-1)$



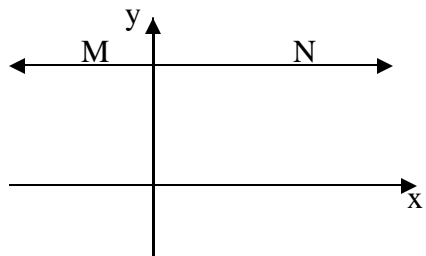
b)  $A(2,100)$  and  $B(4,200)$



c)  $C(4,0)$  and  $D(4,10)$



d)  $M(-2,3)$  and  $N(5,3)$



**Property #1**

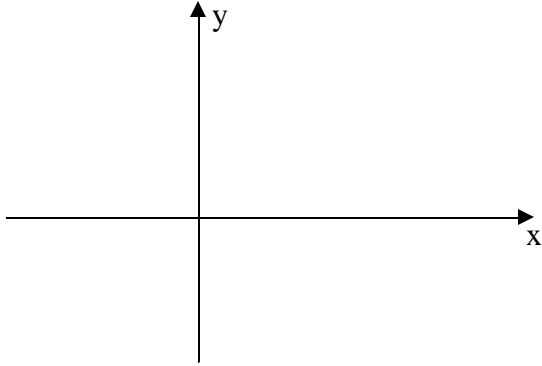
A line is descending if and only if its slope is negative.

A line is ascending if and only if its slope is positive.

A line is vertical if and only if its slope is undefined.

A line is horizontal if and only if its slope is zero.

2. a) Graph the line  $4x - 2y = 8$  by intercepts.



b) Compute the slope using the x-intercepts and y-intercepts.

c) Compute the slope using  $(4,4)$ ,  $(1,-2)$ .

---

**Property #2**

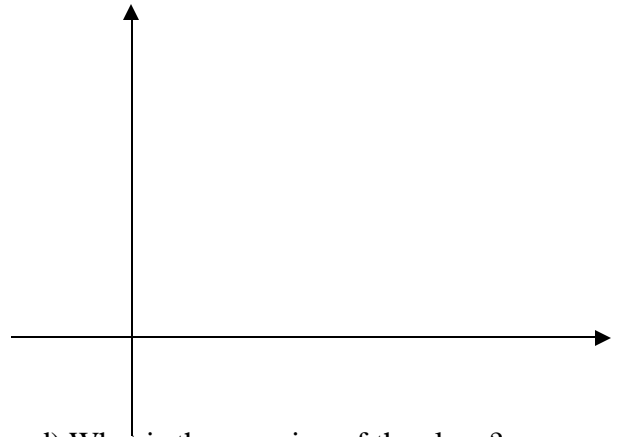
A line has constant slope.

The Meaning of Slope

3. The distance in miles that a car is driven is given by  $d = 55t$ , where  $t$  is the number of hours the car is driven.

a) Make a table of values.

b) Graph the equation



c) Using 2 points, compute the slope.

d) What is the meaning of the slope?

4. a) For each graph, choose 2 points and compute the slope (including units).

b) Explain what the slope measures in the context of the problem.

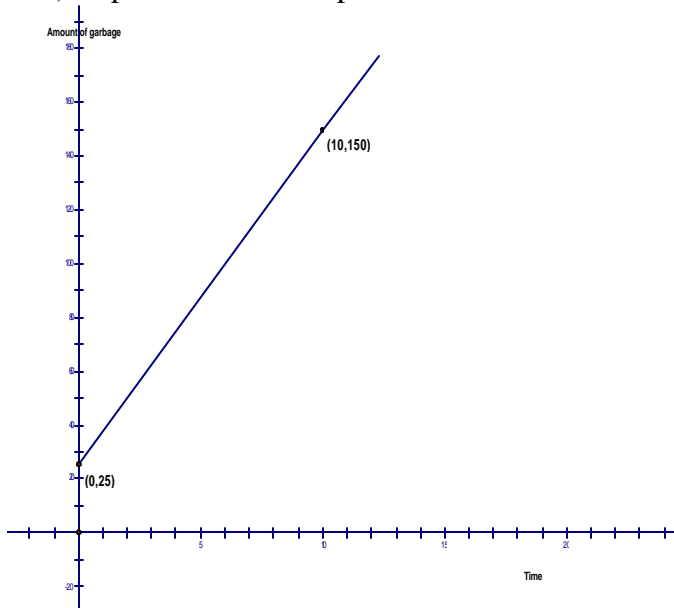


Fig. shows the amount of garbage,  $G$ , (in tons) that has been deposited at a dump  $t$  years after new regulations go into effect.

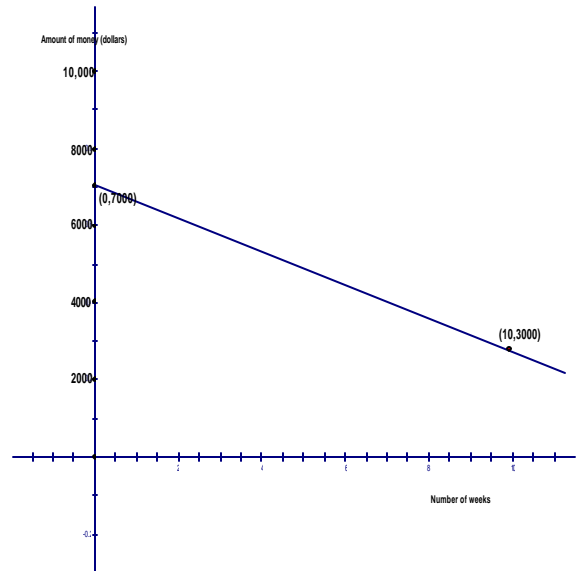


Fig. shows the amount of money,  $M$  (in \$) in Tammy's bank account  $w$  weeks after she loses all sources of income.