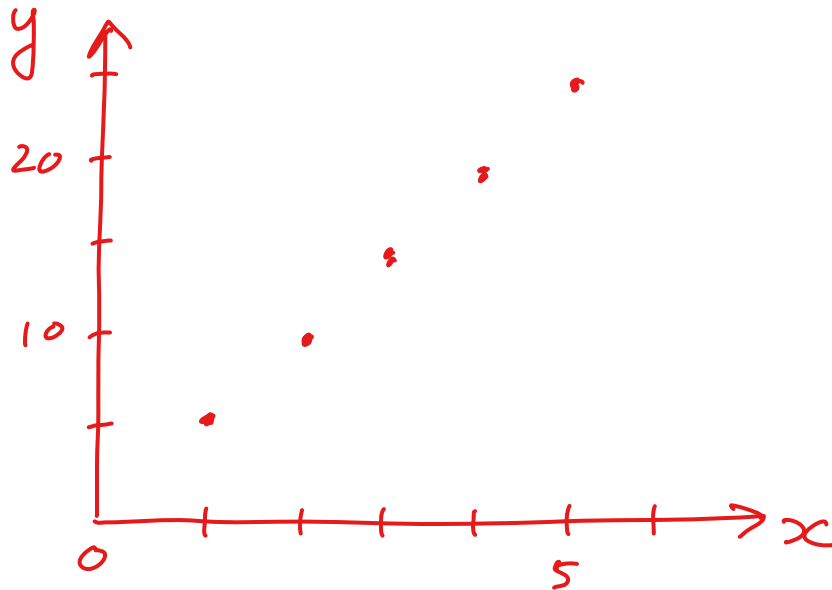# Practice (6.2A)

1. a) Graph the ordered pairs in the table of values.

x	0	1	2	3	4	5
y	0	5	10	15	20	25

b) What is the difference in value for consecutive *x*-values? What is the difference in value for consecutive *y*-values?

x-values: 1   5-4=1, 4-3=1, etc.

y-values: 5   25-20=5, 20-15=5, etc.

c) What is an expression for *y* in terms of *x*?

$$y = 5x$$

2. For each table of values, tell whether the relationship is linear. Explain how you know.

a)

s	2	3	4	5	6
t	5	9	15	19	25

+1 +1 +1 +1

+4 +6 +5 +6

No. The change in y compared to the change in x is not constant.

b)

h	i
7	−6
4	−3
1	0

−3, −3 (left brackets), +3, +3 (right brackets)

Yes. The $\dfrac{\text{change in } y}{\text{change in } x}$ is constant

$$\frac{3}{-3} = \boxed{-1} \qquad \frac{3}{-3} = \boxed{-1}$$

SAME

3. For the following table of values, graph the ordered pairs. Does the relationship appear to be linear? Explain.

+2   +1   +3

u	0	2	3	6
v	3	9	12	21

+6   +3   +9
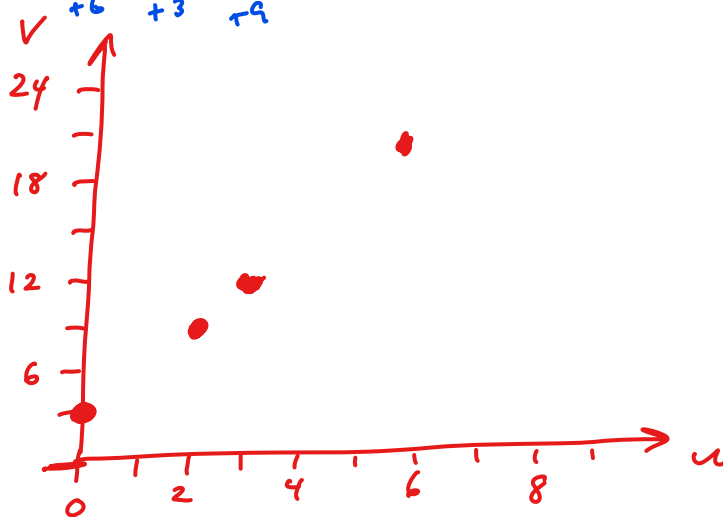
Yes. The points are on the same line

Also, $\dfrac{\text{change in } y}{\text{change in } x}$ is constant.

$$\frac{6}{2} = \frac{3}{1} = \frac{9}{3} = \boxed{3}$$

4. Mahesha has $100 altogether, in $10 bills and $5 bills.

a) Fill in the table of values to show at least five possible combinations of $10 bills and $5 bills that Mahesha may have. Add columns to the table if necessary.

Number of $10 Bills t	0	1	2	3	4
Number of $5 Bills f	20	18	16	14	12

b) Draw a graph of the data. Does the relationship appear linear? Explain.
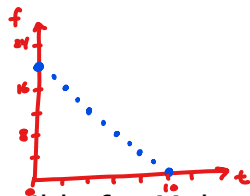
Yes. The points appear to be on a straight line

c) Is it possible for Mahesha to have 19 $5 bills? Explain.

No. Having 19 $5 bills would require having $\frac{1}{2}$ of a $10 bill. This is impossible