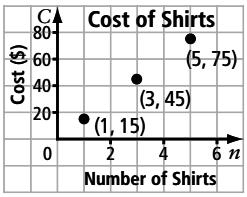
Get Ready

Date: _____

Creating a Table of Values

You can use the coordinate pairs on the graph to make a **table of values**. Arrange the table of values horizontally or vertically. The first row or column in a table of values has the same title as the horizontal axis on the graph. The second row or column has the same title as the vertical axis.

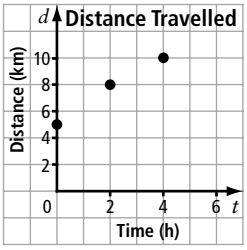


Number of Shirts, *n*	1	3	5
Cost, *C*	15	45	75

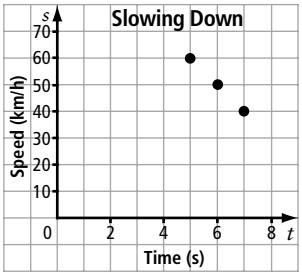
Number of Shirts, *n*	Cost, *C*
1	15
3	45
5	75

1. Create a table of values from each graph.

a)



b)

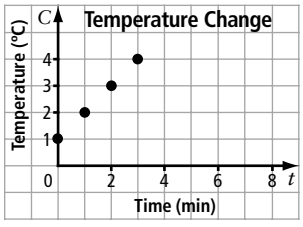


Analysing Graphs of Linear Relations

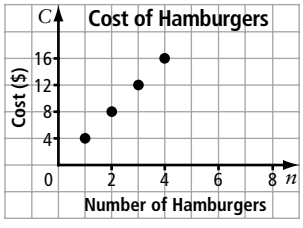
A **linear relation** is a pattern made by a set of points that lie in a straight line. Sometimes it is possible to have points between the ones shown on a graph. Ask, "Does it make sense to have values between those on the graph?"

2. Does it make sense to have points between the ones on each graph? Explain.

a)



b)



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Patterns in a Table of Values

Linear relations can be represented using a table of values. You can sometimes tell that a relationship in a table is linear if both of the following statements are true.

- Consecutive values in one column change by the same amount.
- Consecutive values in the other column change by the same amount.

s	t
2	6
4	12
6	18
8	24

The difference between consecutive values for s is 2. The difference between consecutive values for t is 6. You can use this information to predict the next values in the table.

For s, the next value could be 10.

For t, the next value could be 30.

3. Determine if each table of values represents a linear relation. Explain how you arrived at your answer.

a)

Distance, d (m)	Speed, s (m/s)
0	2.1
15	4.2
30	6.3
45	8.4

b)

Time, t (s)	Height, h (m)
5	10
10	20
15	40
20	80

4. For each table of values in #3 that represents a linear relation, predict the next ordered pair.

Linear Relationships

Linear relationships represented by formulas or equations can be graphed by

- making a table of values, and
- graphing the ordered pairs from the table of values.

5. For each equation, create a table of values and graph the linear relation.

a) $y = 3x + 2$

b) $t = -4n + 3$