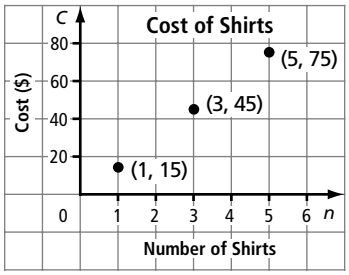
Name: _____ Date: _____

Get Ready

Creating a Table of Values

A table of values shows how sets of numbers are related.
Points on a graph are called coordinates or ordered pairs.
Example: (3, 45)
Tables of values can be horizontal (↔) or vertical (↕).
To make a table of values from the points on a graph:

- label the first row or column with the same title as the horizontal axis
- label the second row or column with the same title as the vertical axis



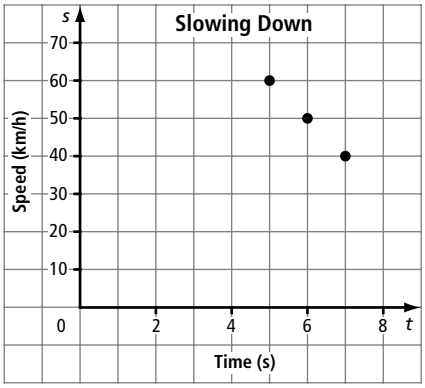
Horizontal:

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

Vertical:

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

1. Complete both tables of values for the graph.



Analysing Graphs of Linear Relations

A relation is a pattern made by 2 sets of numbers.

FOLDABLES™ Study Tool

linear relation

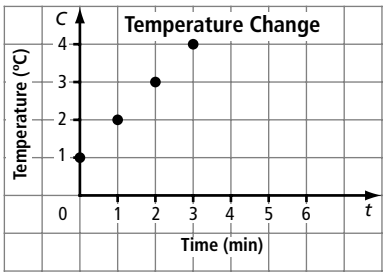
- a pattern made by a set of points that lie in a straight line

Sometimes you can plot points between the points on a graph.

To decide if you can plot a point between 2 points on a graph, ask yourself, "Does this point make sense?"

Name: _____ Date: _____

2. Would it make sense to plot a point between the points on the graph? Circle YES or NO. Give 1 reason for your answer.



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Patterns in a Table of Values

You can show **linear relations** as points in a line on a graph and in a table of values.
A table of values shows a linear relation when the numbers in 1 row or column increase or decrease by the same amount.

	s	*t*	
+2	2	6	+6
+2	4	12	+6
+2	6	18	+6
	8	24	

	+3	+3	+3
s	6	9	12	15
t	10	8	6	4
	−2	−2	−2

3. Is the table of values a linear relation? Circle YES or NO. Give 1 reason for your answer.

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

_____

_____

_____

Linear Relationships

To graph a linear relationship:
- make a table of values using the equation
- graph the ordered pairs from the table of values

Example: $y = 3x + 2$

x	*y*
0	2

Substitute 0 for *x*.
$y = 3 \times 0 + 2$
$= +2$

If $x = 0$, then $y = 2$.

4. Create a table of values for the equation, $y = 2x + 3$. Then, graph the linear relation.

x	*y*
0	
1	
2	
3	

$y = 2x + 3$
$y = 2 \times 0 + 3$

$y =$ _____

$y = 2 \times 1 + 3$

$y =$ _____