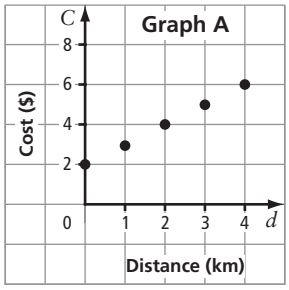
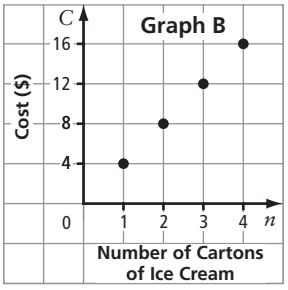
Name: _____ Date: _____

Communicate the Ideas

9.1 Analysing Graphs of Linear Relations

1. For each graph, is it possible to have points between the ones on the graph? Explain.





Graph A: _____

_____

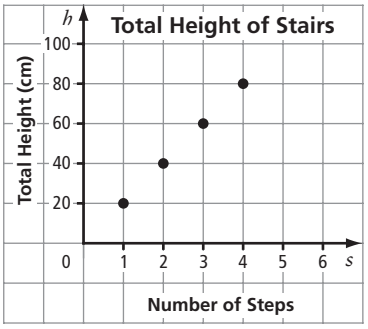
Graph B: _____

_____

Check Your Understanding

Practise

2. The graph shows how much higher you get each time you go up a step of a staircase.



a) Describe the 2 patterns you see in the graph.

- The pattern lies in a _____

_____.

- To move from 1 point to the next:

_____

b) Use the graph to complete the table of values.

Number of Steps	1	2	3	4
Total Height (cm)				

c) Describe the pattern in the table of values.

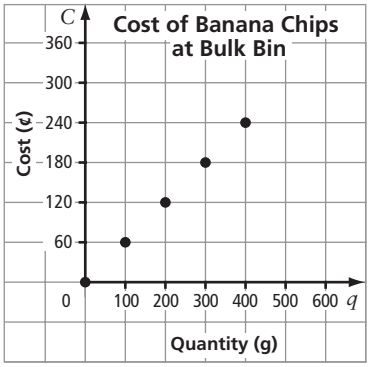
The total height starts at _____ cm and increases by _____ cm.

d) Write an expression for the total height after climbing s stairs: _____

e) If the relationship in the graph continues, what is the total height on step 10?

Name: _____ Date: _____

3. Tessa and Vince go shopping at Bulk Bin.
The graph shows the cost of banana chips.



a) Does the graph show a linear relation? Explain why or why not.

_____

_____

b) Describe 2 patterns shown on this graph.

- The pattern of the points: _____
- To move from 1 point to the next: _____

c) Complete the table of values for this graph.

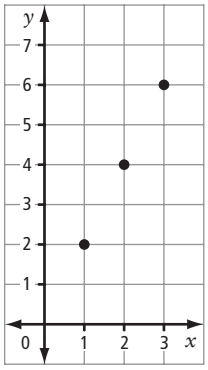
Quantity (g)	0	100	200	300	400
Cost ($)					

d) Can the graph show the cost of 250 g of banana chips? Explain your answer.

_____

Apply

4. **a)** Complete the table of values for the ordered pairs on the graph.



x	1		
y			

b) Describe the 2 patterns you see in the graph.

- The pattern of the points:

_____

- To move from 1 point to the next:

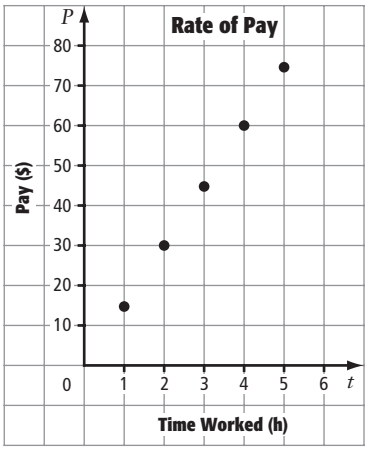
_____

c) Extend your table of values so the x-column goes to 9.

d) If this pattern continues, what is the value of y when $x = 9$? _____

Name: _____ Date: _____

5. The graph shows the rate of pay based on the number of hours worked.



Rate of pay means how much money you are paid for 1 h of work.

a) Make a table of values for the ordered pairs on the graph.

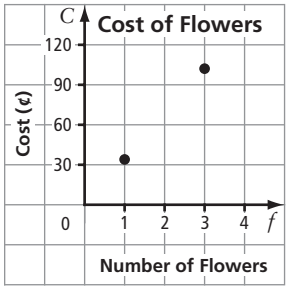
Time Worked (*h*)	Pay ($)
1	

b) What is the hourly rate of pay? _____

Look at the graph.

c) If the time worked is 4.5 h, how much pay is earned? _____

6. The graph shows part of a linear relation that describes the cost of cake flower decorations.



Ask yourself, "Can I buy 2 flowers?"

Is it reasonable to have points between the ones on the graph? Explain your answer.

_____