

1 – Writing Equations to Describe Patterns

Focus: Use equations to describe and solve problems involving patterns.

Try the following ‘Investigate’

A banquet hall has small square tables that seat 1 person on each side. The tables can be pushed together to form longer tables.



The pattern continues.

- Sketch the next 2 table arrangements in the pattern.
What stays the same in each arrangement? What changes?
- What different strategies can you use to determine the number of people at 6 tables? At 10 tables? At 25 tables?

Activity’:

Warmup:

Look at the ‘investigate’ above. Can you describe the pattern:

- a) in words
- b) a table
- c) an equation where
 t = number of tables &
 p = number of people
- d) How many people at 25 tables?

Tables	People
1	4
2	
3	

Ex1

You go to the store to buy peanut butter.

- a) Make notes on or around the table.
- b) Write an equation that relates the cost to

Jars	Cost (\$)
0	0
1	5
2	10
3	15
4	20

the number of jars of peanut butter.

c) What is the cost of 18 jars?

Ex2

Find the equation using the pattern in the table

m	n
0	1
1	3
2	5
3	7

Ex3

Find the equation using the pattern in the table

a	b
3	-1
6	0
9	1
12	2
0	-2

If $a = 26$, what is b ?

Ex4

Empress Cabs charges \$3.75 plus \$1.25 per km.

a) if d = number of km, write an equation for the cost of Empress Cabs.

b) What is the fare for a 19 km ride?

Reflection: What is the biggest challenge for you in this section and how do you think you can improve upon it?