Unit 4: Linear Relations

Name: _____

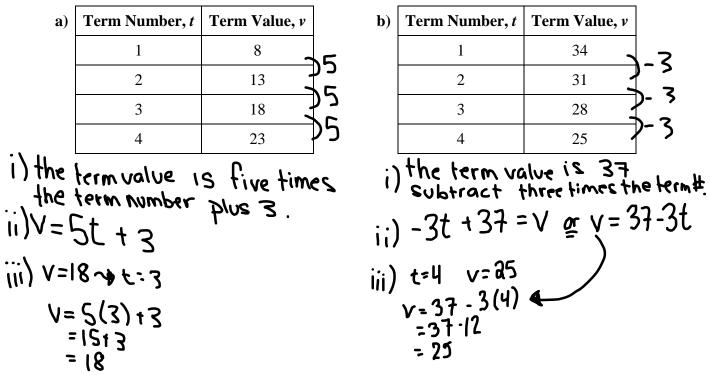
4.1: Writing Equations to Describe Patterns Worksheet

- 1. In each equation, determine the value of A when n is 3. a) A = 2n + 1 = 2(3) + 1 = 6 + 1 = 7c) A = 4n + 3b) A = 3n - 2 = 3(3) - 2 = 9 - 2 = 7d) A = 30 - 2n
- 2. The pattern in this table continues. Which equation below relates the figure number n, to the perimeter of the figure P? (multiple choice question)

P = 3n+4	Figure Number, <i>n</i>	Perimeter, P	'
5111	1	7 _	
	2	10	23
	3	13	73
	4	16	73
a) $P = 3n + 7$	b) $P = 7n + 3$		Numerical
(c) $P = 3n + 4$	d) <i>n</i> =	= 3 <i>P</i> + 7	Numerical Coefficient

- 3. The pattern in each table below continues. For each table:
 - i) Using words describe the pattern that relates v to t.
 - ii) Write an <u>equation</u> that relates v to t.

iii) Verify your equation by substituting values from the table.



- 4. Rachel takes care of homes during the summer while their owners are away on vacation. She charges \$8, plus \$2.50 a day.
 - a) Create a table that shows the charges when the owners are away for up to 5 days.

#ofdays			8+4(2.50) = 18.00
<u> </u>	8+2.50=10.50 8+2(2.50)=13.00 8+3(2.50)=13.00 8+3(2.50)=15.50	5	815(2.50) = 20.50
3	8+3(350)=15.50)2.50	umerical	Coefficient

b) Write an equation that relates the charge, C dollars, to the number of days, n, that the owners are away.

C = 2.50n + 8

c) What will the charge be when the owners are away for 14 days?

