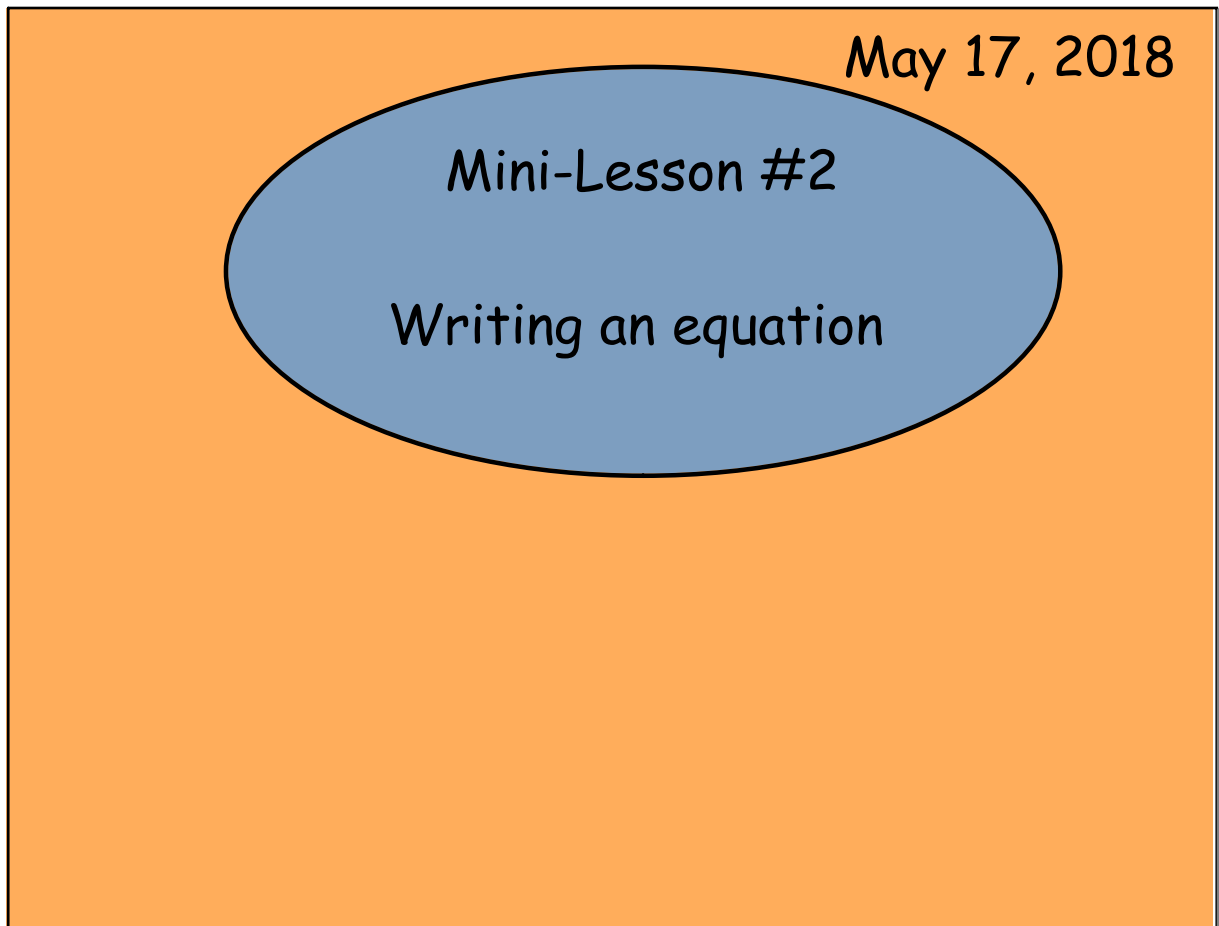
A notebook cover with an orange background. In the center, there is a blue oval containing the text "Unit 4" and "Linear Relations".

Unit 4
Linear Relations

Dec 5-9:43 PM

A notebook cover with an orange background. In the top right corner, the date "May 17, 2018" is written. In the center, there is a blue oval containing the text "Mini-Lesson #2" and "Writing an equation".

May 17, 2018

Mini-Lesson #2
Writing an equation

Dec 5-9:43 PM

Here is a pattern made from square tiles.

Figure 1 Figure 2 Figure 3

$T = F + 6$

figure #	# tiles
1	7
2	8
3	9
	6

What stays the same in each figure? What changes?
 How can we determine the number of square tiles in any figure in the pattern?

What is the same in each diagram?
 What changes and how does it change?
 Create a table of values....

$T = f + 6$

Nov 1-1:55 PM

Example 1: Writing an equation using the table of values.

Independent variable dependent variable

x	y
1	10
2	15
3	20
4	25

First see how much the dependent variables are increasing by:
 5 each time

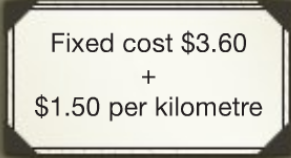
Then, choose one of the independent variables and multiply it by this number:
 $y = 5x + 5$

How much (more or less) would you need to get the dependent amount?

Dec 1-12:58 PM

Example 2 Writing an Equation to Represent an Oral Pattern

I called Kelly's Cabs. The cost of a ride is shown on a poster in the cab.



a) Write an expression for the fare in terms of the fixed cost and the cost per kilometre.

$$3.60 + 1.50k$$

b) Write an equation that relates the fare to the distance travelled.

$$C = 1.50k + 3.60$$

c) What is the fare for an 11-km ride?

$$C = 1.50(11) + 3.60$$

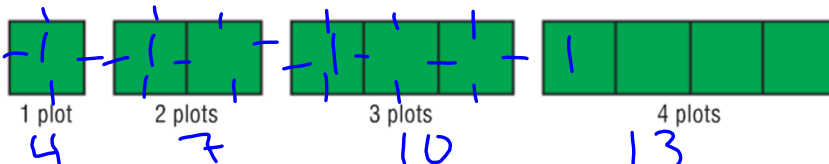
$$C = 16.50 + 3.60$$

$$C = 20.10$$

Dec 7-10:58 PM

Example 3:

A landscape designer uses wooden boards as edging for the plots in a herb garden.



The number of boards, b , is related to the number of plots, p .

What is the same in each diagram?

1st plot

What changes and how does it change?

of boards

Create a table of values....

Plot # (p)	# of boards (B)
1	4
2	7
3	10
4	13

$$B = 3p + 1$$

Nov 1-1:56 PM

End of Mini-Lesson #3

Nov 1-2:10 PM

Extra
Practice #1:

term # (T)	Term value (v)
1	80
2	76
3	72
4	68

$v = [-4T] + 84$
 $-4(1)$

-4
 -4
 -4

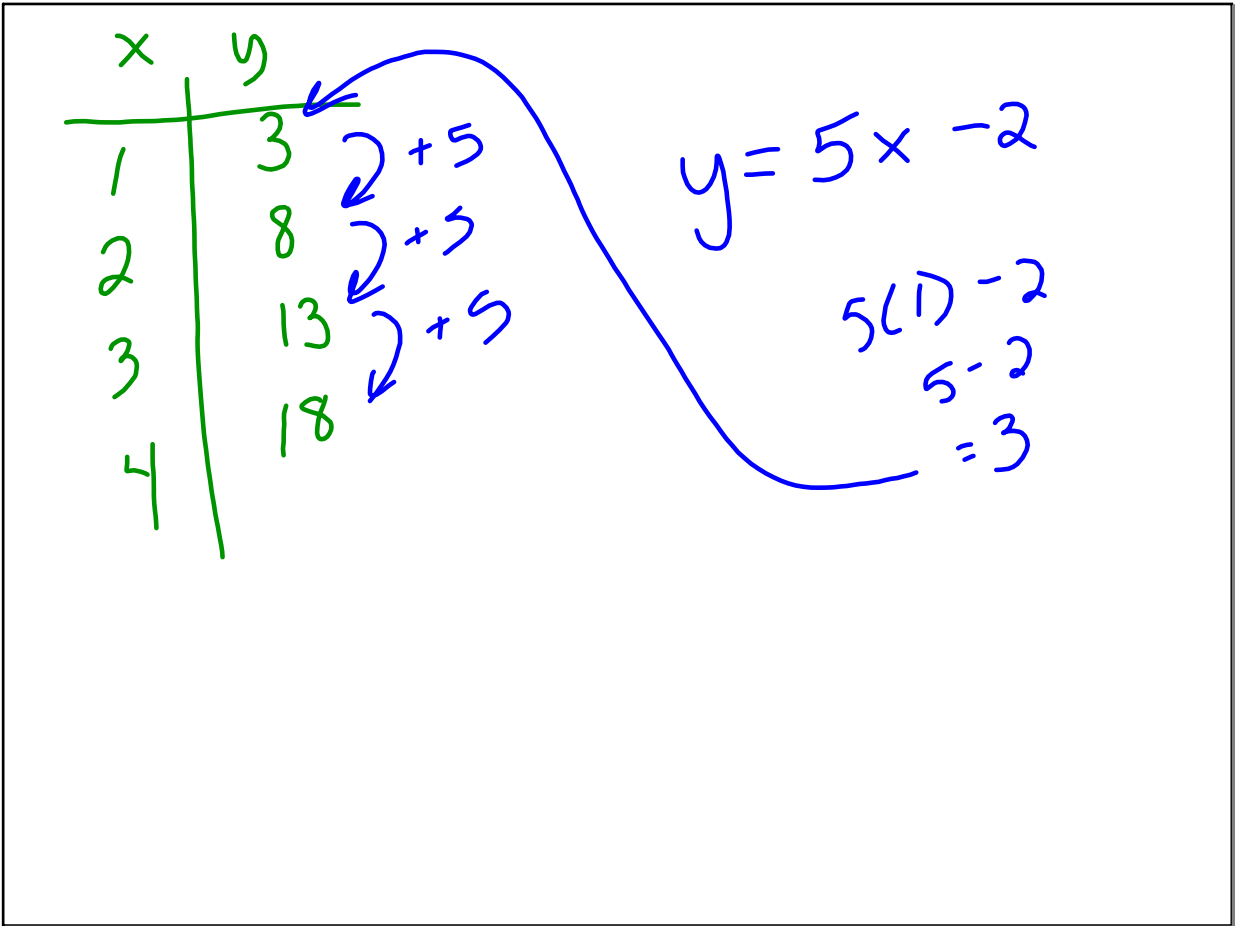
Dec 1-11:07 AM

x	y
1	3
2	8
3	13
4	18

↓ +5
↓ +5
↓ +5

$y = 5x - 2$

$5(1) - 2$
 $5 - 2$
 $= 3$



Nov 5-11:27 AM