

September 8, 2011

**Warm-up:**

10 pts

Find the next 3 numbers in each sequence:

1. 11, 17, 23, 29, 35, 41, 47, 53

2. 76, 68, 60, 52, 44, 36, 28, 20

*Don't count* ~~3. 1, 5, 13, 29, 61, 125, 253, 513~~  
4   8   16   32   64   128   256   509

4. If the first differences of a sequence are a constant 6 and the third term is 50, find the first 5 numbers in the sequence.

38 44 50 56 62  
+6   +6   +6   +6

---

**Hand in homework:**

**Bunny dot-to-dot**

---

9/7<sup>8</sup> - Representing Linear Patterns

If you belong to a DVD club that charges a \$20 monthly fee plus \$15 for each DVD you purchase, use the information below to write an equation that represents how much money is spent each month.

# of DVDs purchased	0	1	2	3	4	5
Total paid monthly	20	35	50	65	80	95

Handwritten annotations: A red 'x' is written to the left of the first row, and a red 'y' is written to the left of the second row. Blue arrows point from the values 35, 50, 65, 80, and 95 in the second row down to the values +15, +15, +15, +15, and +15 written below the table.

$$y = 15x + 20$$

Write an equation for the given data:

x	0	1	2	3	4	5
y	4	6	8	10	12	14

$y = 2x + 4$

↑  
lst diff

↑  
y-value at  $x=0$

Write an equation for the given data:

x	0	1	2	3	4	5
y	35	47	59	71	83	95

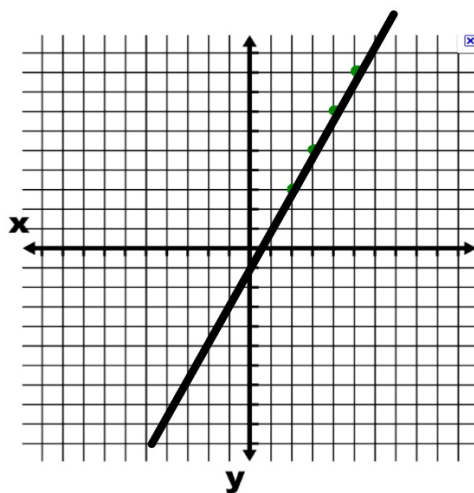
$+12$   $+12$   $+12$   $+12$   $+12$

$$y = 12x + 35$$

Make a table for  $y = 2x - 1$  using the x-values 2, 3, 4, 5...

x	$2x - 1$		
2	$2(2) - 1$	3	$(2, 3)$
3	$2(3) - 1$	5	$(3, 5)$
4	$2(4) - 1$	7	$(4, 7)$
5	$2(5) - 1$	9	$(5, 9)$

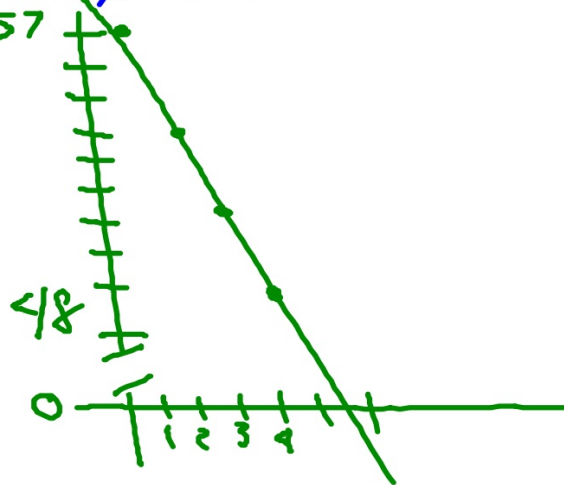
...then graph it.



Make a table for  $y = 60 - 3x$  using the x-values 1, 2, 3, 4...

x	$60 - 3x$	
1	$60 - 3(1)$	57
2	$60 - 3(2)$	54
3	$60 - 3(3)$	51
4	$60 - 3(4)$	48

...then graph it.



## Homework:

page 34

#8-28 ~~all~~  
*evens*

Due ~~Thursday~~  
*Friday*