## Ready, Set, Go!

### Ready

Topic: Find the slope of the line that goes through each pair of points.    © 2012 www.flickr.com/photos/atl_cadets

1.  (3,7) and (5, 10)

2.  (-1, 4) and (3,3)

3.  (0,0) and (-2, 5)

4.  (-1, -5) and (-4, -5)

Topic: Write the equation of a line given two points.

Find the equation of the line that goes through each pair of points. Graph the equation and explain the values for $x$ that would work for each line.

5.  (5,2) and (7,0)

6.  (-4,2) and (6,6)

7.  (3,0) and (0, 4)

8.  (2,-4) and (2, 6)

9.  (2,2) and (8,8)

## Set

Topic: Finding terms for a given sequence.

Find the next 3 terms in each sequence.  Identify the constant difference. Write recursive equations for the following arithmetic sequences, and then write the explicit equation. Identify where you see the constant difference in both equations.

10.     Constant difference? _____

| 3 | 8 | 13 | 18 | 23 | | | |
|---|---|----|----|----|---|---|---|

Recursive equation:                       Explicit equation:

11.     Constant difference? _____

| 11 | 9 | 7 | 5 | 3 | | | |
|----|---|---|---|---|---|---|---|

Recursive equation:                       Explicit equation:

12.     Constant difference? _____

| 3 | 1.5 | 0 | -1.5 | -3 | | | |
|---|-----|---|------|----|---|---|---|

Recursive equation:                       Explicit equation:

## Go

Topic: Write the equations in slope intercept form.

13. $y = 12 + ( x - 1 )(-4)$

14. $\dfrac{2}{3}(6y+9) = \dfrac{3}{5}(15x-20)$

15. $\dfrac{5}{7}(21y+7) = \dfrac{2}{9}(18x+27)$

## Set

Topic: Find the recursive and explicit equations for each geometric sequence. Then sketch a graph of the sequence. Place the term number on the x-axis and the values of the sequence on the y-axis.

16.    2, 4, 8, 16…

17.

| Time (days) | Number of cells |
|---|---|
| 1 | 3 |
| 2 | 6 |
| 3 | 12 |
| 4 | 24 |

18.  Claire has $300 in an account. She decides she is going to take out half of the money remaining in the account at the end of each month.

19.  Tania creates a chain letter and sends it to four friends. Each friend is then instructed to send it to four of their friends, and so forth.

20.

 Day 1              Day 2                      Day 3

+  +              +  +  + +              +  +  +  +  + + + +
+  +              +  +  + +              +  +  +  +  + + + +
+  +              +  +  + +              +  +  +  +  + + + +

Need Help? Check out these related videos:

Find equation of line  http://patrickjmt.com/find-the-equation-of-a-line-using-point-slope-form/

Need Help? Check out these related videos:

Finding slope   http://www.khanacademy.org/math/algebra/ck12-algebra-1/v/slope-and-rate-of-change

Writing the explicit equation   http://www.khanacademy.org/math/algebra/solving-linear-equations/v/equations-of-sequence-patterns

Writing equations in slope-intercept form   http://www.khanacademy.org/math/algebra/linear-equations-and-inequalitie/v/converting-to-slope-intercept-form