

Final Review

Find the following information for the given Arithmetic sequences.

1) 36, 45, 54, 63, ...

common difference= _____
 explicit formula= _____

52nd term in sequence= _____

2) 32, 24, 16, 8, ...

common difference= _____
 explicit formula= _____

52nd term in sequence= _____

Find the following information for the given Geometric sequences.

3) 4, 12, 36, 108, ...

common ratio= _____
 explicit formula= _____

8th term in sequence= _____

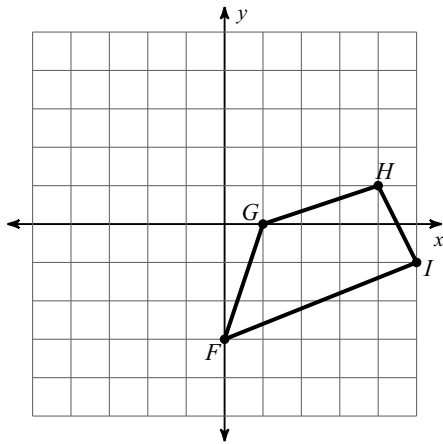
4) 2, 8, 32, 128, ...

common ratio= _____
 explicit formula= _____

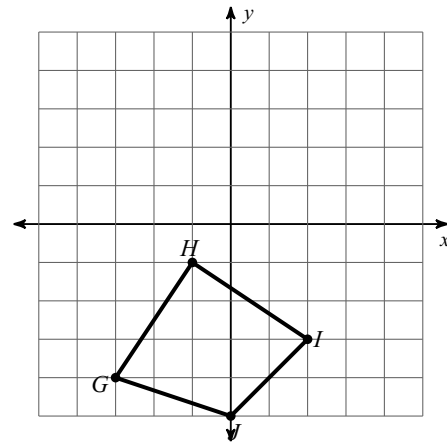
8th term in sequence= _____

Graph the image of the figure using the transformation given.

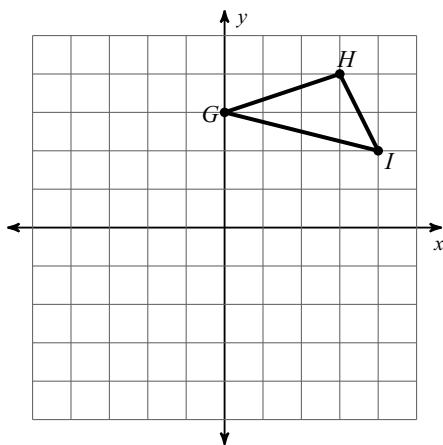
5) translation: 1 unit left and 3 units up



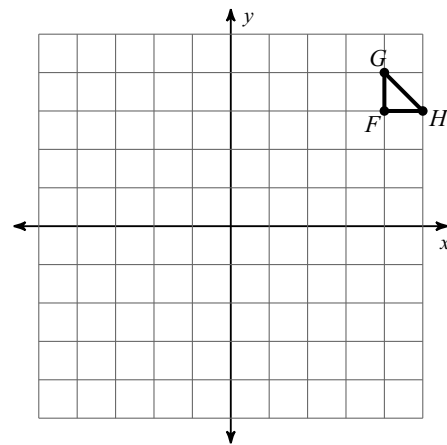
6) reflection across the x-axis



7) rotation 180° about the origin



8) rotation 270° counterclockwise about the origin



Sec I

Solve each system by substitution.

9) $y = -3x + 15$
 $y = x + 3$

10) $-4x - 6y = 12$
 $y = -3x - 16$

Solve each system by elimination.

11) $5x + 3y = -7$
 $-5x + 5y = -25$

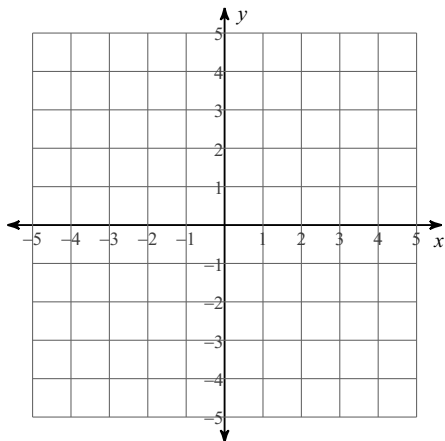
12) $8x + 2y = -28$
 $8x + 4y = -8$

13) $8x + 3y = 23$
 $-5x - 6y = -2$

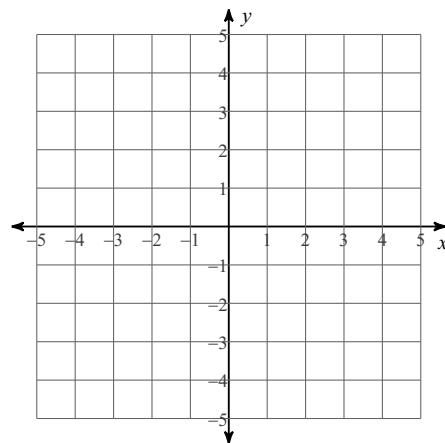
14) $5x + 9y = 24$
 $2x + 4y = 12$

Sketch the solution to each system of inequalities.

15) $y \geq \frac{1}{3}x + 1$
 $y > \frac{5}{3}x - 3$



16) $y \leq x - 3$
 $y > -2x + 3$



Write the equation of the line in slope-intercept form given the following information.

18) $m = \frac{5}{3}, b = -3$

19) $2x + 7y = 14$

20) $y - 5 = 4(x - 3)$

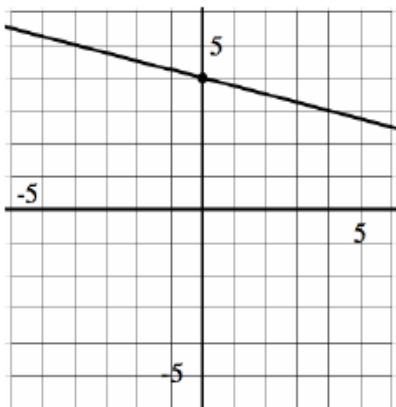
21) $m = 1, (-2, 3)$

22) $(0, 3), (-4, 4)$

23) $(-5, -3), (0, -3)$

24)

Graph a line *parallel* to the given line.

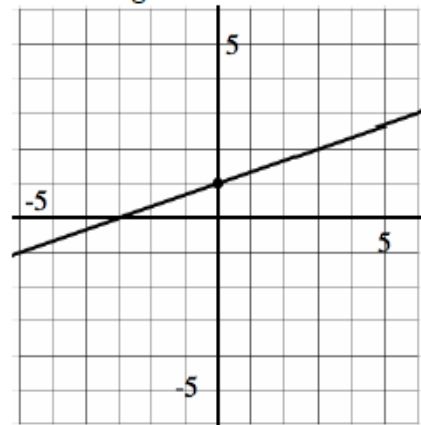


Equation for given line:

Equation for new line:

25)

Graph a line *perpendicular* to the given line.

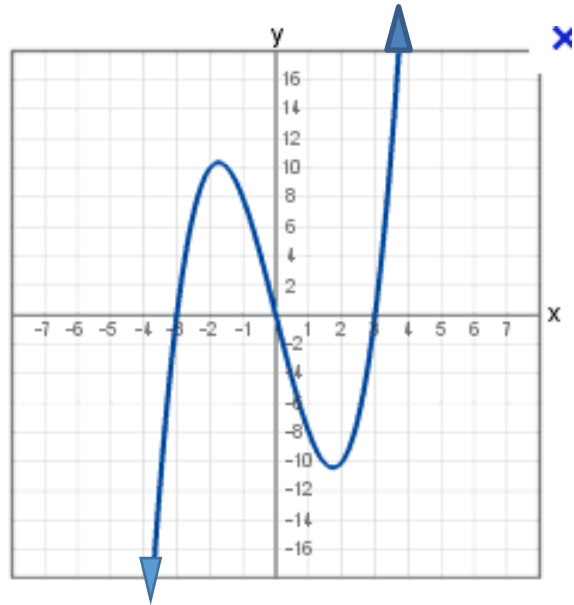


Equation for given line:

Equation for new line:

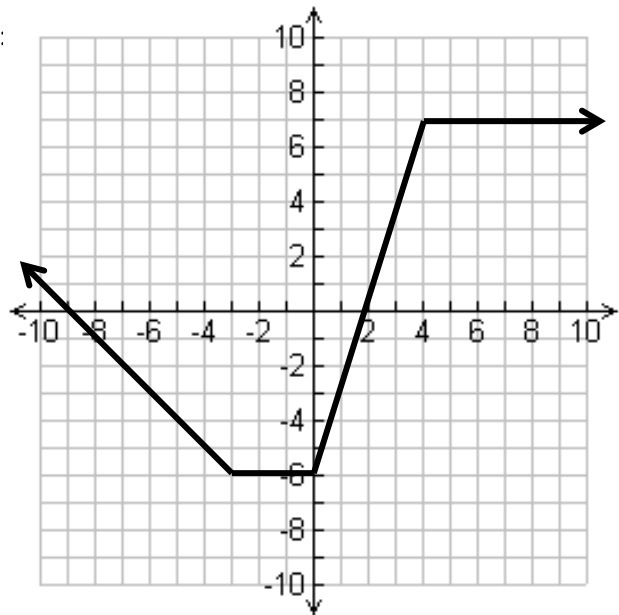
26) Find the following **key features** of the graph:


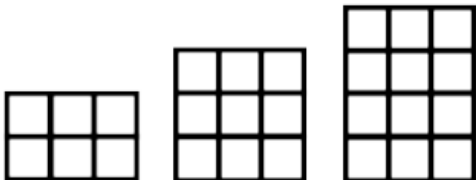
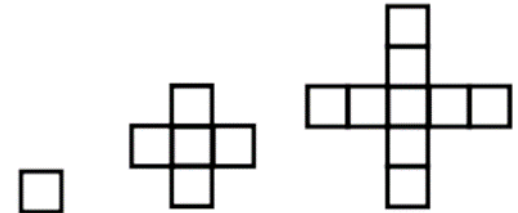
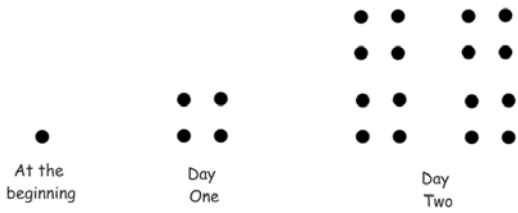
- a) domain:
- b) range:
- c) x -intercept(s):
- d) y -intercept(s):
- e) relative maximum/minimum:
- f) Identify the interval(s) of:
 - increasing:
 - decreasing:
 - constant:



27) Find the following **key features** of the graph:

- a) domain:
- b) range:
- c) x -intercept(s):
- d) y -intercept(s):
- e) relative maximum/minimum:
- f) Identify the interval(s) of:
 - increasing:
 - decreasing:
 - constant:



Pattern	Next Figure	Table of Values		Formula	Type?
 <p>Step 1 Step 2 Step 3</p>		Step # (n)	# of Squares $f(n)$	Recursive: Explicit:	Arithmetic _____ Geometric _____
 <p>Step 1 Step 2 Step 3</p>		Step # (n)	# of Squares $f(n)$	Recursive: Explicit:	Arithmetic _____ Geometric _____
 <p>Step 1 Step 2 Step 3</p>		Step # (n)	# of Squares $f(n)$	Recursive: Explicit:	Arithmetic _____ Geometric _____
 <p>At the beginning Day One Day Two</p>		Step # (n)	# of Squares $f(n)$	Recursive: Explicit:	Arithmetic _____ Geometric _____