Name _____

1) Solve these equations.

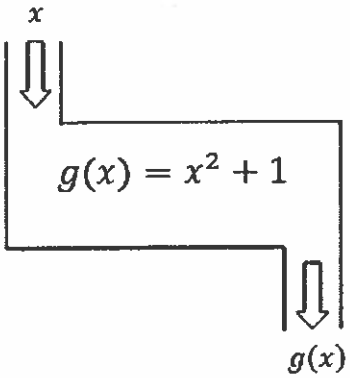
a. $2(n + 5) = -2$	b. $24a - 22 = 10a - 4 + 14a$	c. $4x - 5 + 2x - 1 = 8x - 10 - 2x + 4$

2) Simplify these expressions with the exponent rules. (with positive and negative exponents)

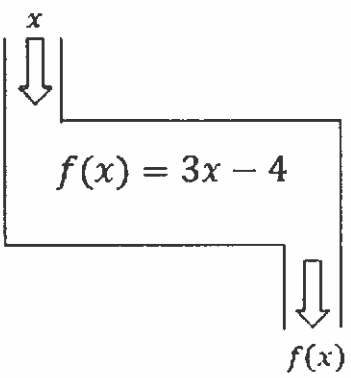
a. $\frac{a^4b \cdot ab}{a^3b^5}$	b. $x \cdot x^{-5}$	c. $5t(t^3)^0$

3) Use the function machines and give your answers in proper function notation.

a. Let x=7, find the value of g(7).



b. Solve for x when f(x)=-25.



Evaluate each using the values given.

4) $q\left(\frac{q}{5} + 4\right) - q - (r + r)$; use $q = 5$, and $r = 3$

5) $\frac{m + m}{6} - 1 + mn + 4$; use $m = 3$, and $n = 4$

Find the slope of the line through each pair of points. (Fractions are ok)

6) (11, 17), (3, 2)

7) (12, −16), (−2, −5)

8) This table represents the number of tiles in a particular tile pattern.

a. How many tiles are in figure 4?

b. How does the number of tiles grow?

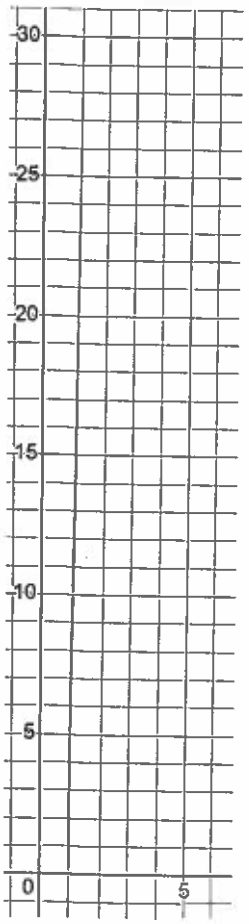
c. How many tiles are in figure 0?

d. Plot and connect the points with a straight edge.

e. What form does the graph make?

This means that growth by addition is linear.

Figure # x	# of Tiles y
0	6
1	13
2	20
3	27
4	



Write each number in scientific notation.

9) 0.000039

10) 628000

Write each number in standard notation.

11) 7.48×10^{-5}

12) 4.2×10^{3}

Simplify. Your answer should contain only positive exponents.

13) $3x^{-2}y^{4} \cdot 3y^{2}$

14) $x^{4}y^{-4} \cdot 4yx^{4}$

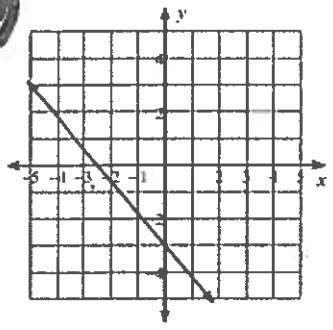
Simplify. Write each answer in scientific notation.

15) $(6.3 \times 10^{-6})(5.7 \times 10^{-3})$

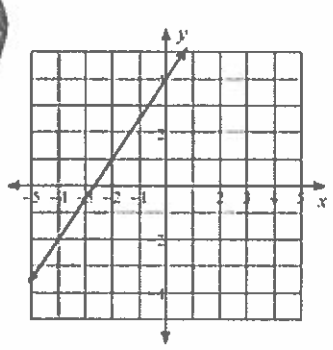
16) $(2 \times 10^{-4})(1.8 \times 10^{-4})$

Write the slope-intercept form of the equation of each line.

17)



18)

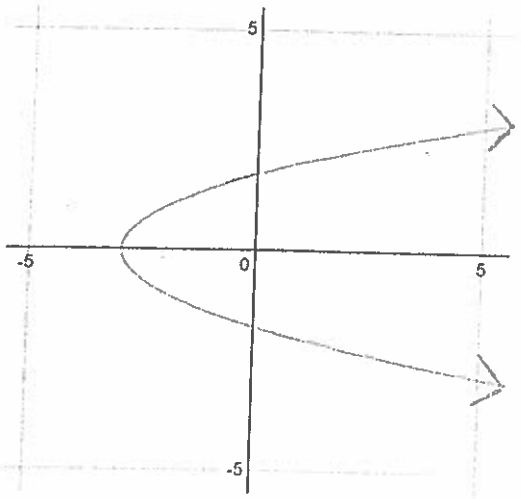


Write the slope-intercept form of the equation of the line through the given points.

19) through: (1, 3) and (0, –3)

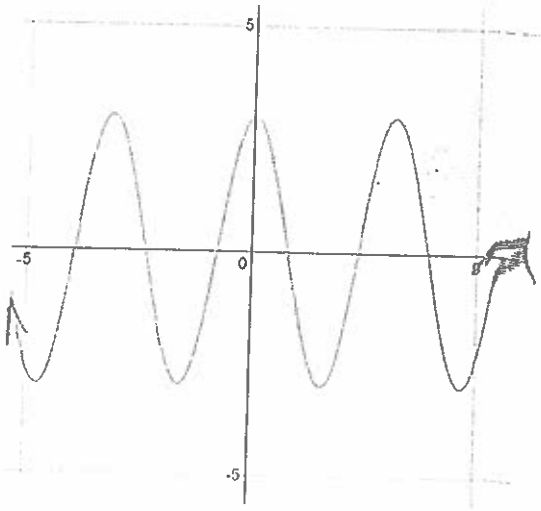
20) through: (–3, 4) and (–5, –2)

6. Examine each graph.



a. Is it a function? Why or why not?

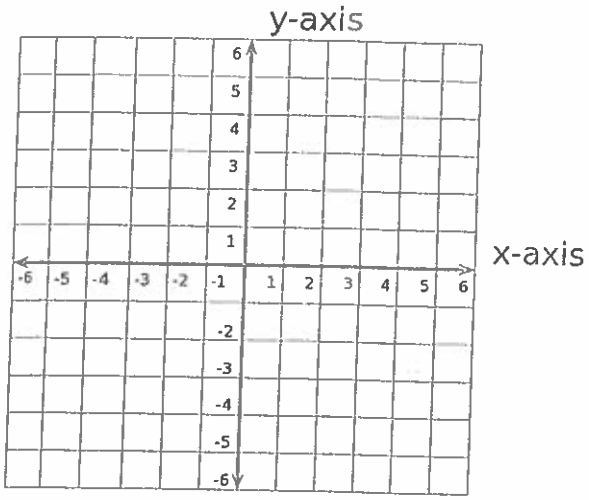
b. State its domain and range in the form of sentences.



a. Is it a function? Why or why not?

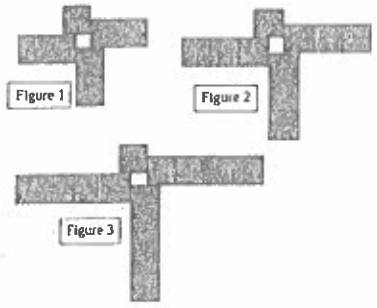
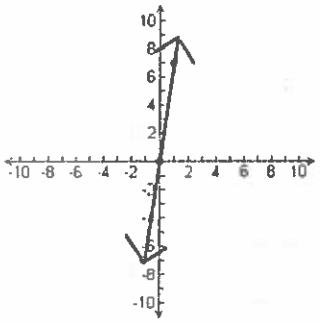
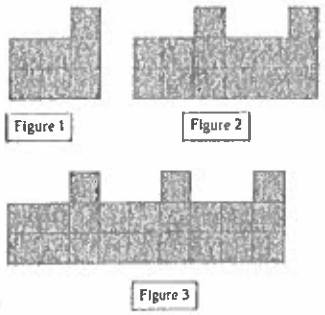
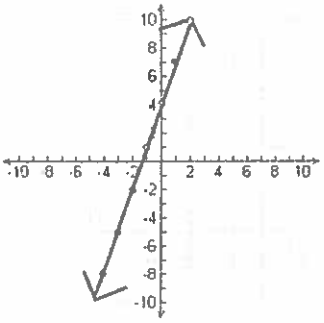
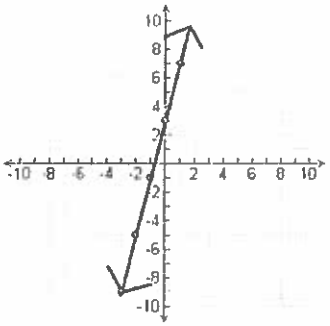
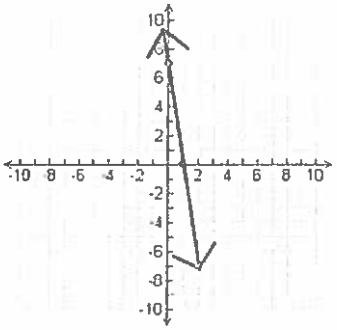
b. State its domain and range in the form of sentences.

7. Find the slope between these points. Try it without graphing and then check your work with a graph.



a. Use the slope formula or graph to find the slope of these two points: (3,2) and (4,5)

8. Group each representation that represents the same thing together. If any representations don't match anything else, put it in the "Doesn't Match" category.

Tile pattern	table	Graph	equation
a. 	i.	A. 	f(x)=3x+4
b. 	ii.	B. 	g(x)==4x+3
c. 	iii.	C. 	h(x)=7x
d. 	iv.	D. 	j(x)=x+7

x	y
0	0
1	7
2	14
3	21

x	y
0	7
1	8
2	9
3	10

x	y
0	4
1	7
2	10
3	13

x	y
0	3
1	7
2	11
3	15