

#1 - 4: What is the slope of the line passing through the two points? Reduce if necessary.

1) $(-15, 7)$ and $(-10, 6)$

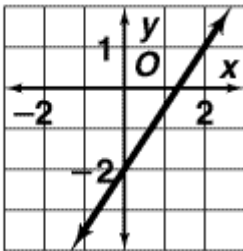
2) $(-3, -2)$ and $(1, 4)$

3) $(-2, 5)$ and $(4, -2)$

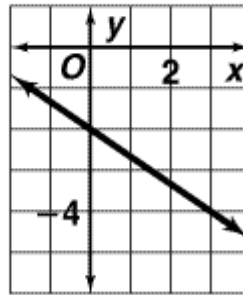
4) $(-1, -2)$ and $(3, 2)$

#5 - 6: What is the slope of the line on the graph?

5)



6)



#7 - 8: Find and describe the rate of change from the table.

7)

Time (min)	Water left in pool (gal)
10	80
20	60
30	40
40	20

- a. $-\frac{2}{1}$; The amount of water left in the pool decreases by 2 gallons per minute.
- b. $-\frac{1}{2}$; The amount of water left in the pool decreases by 2 gallons per minute.
- c. 80; The amount of water left in the pool is 80 gallons.
- d. 40; The amount of water decreases for 40 minutes.

8)

# Cupcakes	Cost (\$)
2	4.50
3	5.25
4	6.00
5	6.75

- a. $\frac{1}{0.75}$; Each additional cupcake costs \$0.75.
- b. $\frac{0.75}{1}$; Each additional cupcake costs \$0.75.
- c. $\frac{2.25}{1}$; Each additional cupcake costs \$2.25.
- d. $\frac{1}{2.25}$; Each additional cupcake costs \$2.25.

9 - 10: What are the slope and y-intercept of the given equations?

9) $y = 2x - 5$

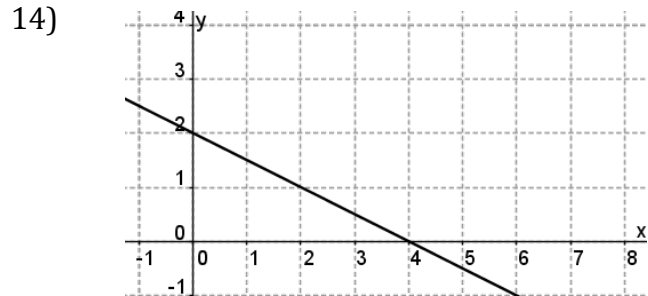
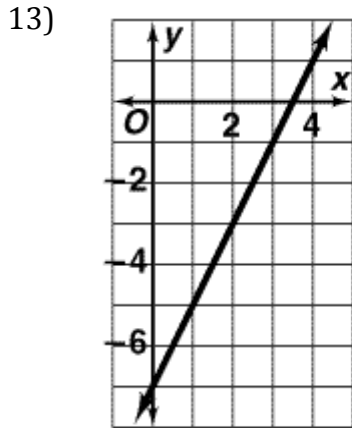
10) $y = -\frac{1}{2}x - \frac{5}{2}$

11-12: Write the slope-intercept form of the linear equation given the following information.

11) $m = -2; b = 5$

12) $m = 4; b = -3$

13-14: Write the slope-intercept form of the linear equation given the graph of the line.



15-16: Find the pattern to answer the questions. The figures follow a linear pattern.

15) Draw Figure 0 and Figure 4. Complete the input/output table.

Fig. 0

Fig. 1

Fig. 2

Fig. 3

Fig. 4



Figure #	# of Lines
0	
1	
2	
3	
4	

Write the linear function rule for the pattern.

How many lines would Fig. 10 have? Fig. 50?

Use the function rule and function notation to show work.

16) Draw Figure 0 and Figure 4. Complete the input/output table.

Fig. 0

Fig. 1

Fig. 2

Fig. 3

Fig. 4



Figure #	# of Diamonds
0	
1	
2	
3	
4	

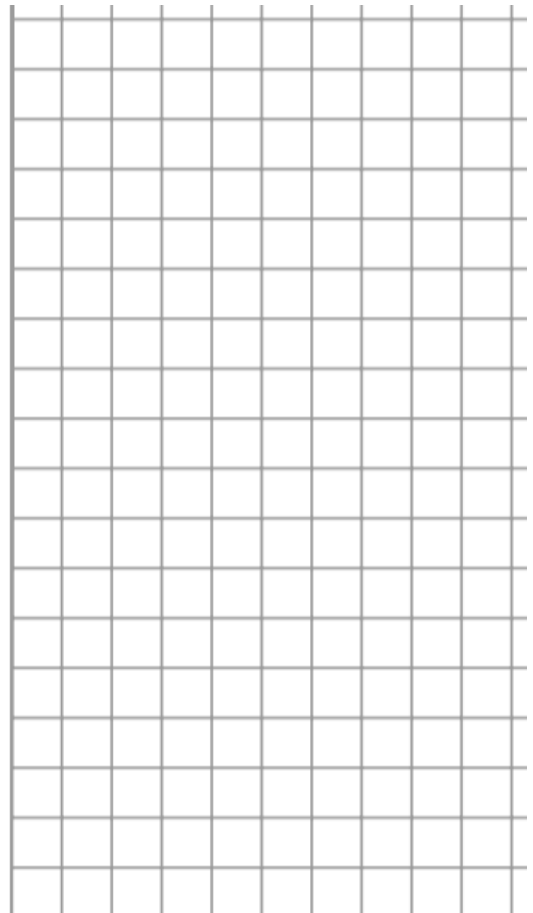
Write the linear function rule for the pattern.

How many lines would Fig. 10 have? Fig. 50?

Use the function rule and function notation to show work.

17) Carlita has 15 marbles. She gives away 2 marbles to each of her friends.

- Define x and y .
- Model the scenario with a graph and a linear equation.
- How many friends can she give marbles to and still have 5 marbles left? Justify your answer.



18) Juan's savings account currently has \$300. Every week, he deposits \$50 from his paycheck.

a. Define x and y .

b. Model the scenario with a graph and a linear equation.

c. After how many weeks will Juan's account have \$1000? Justify your answer.

