NAME DATE PERIOD

Lesson 1: Something to Talk About

Ready, Set, Go

Ready

Rewrite the following expressions by applying the distributive property.

1. $3\,(2x + 7)$

2. $-12\,(5x - 4)$

3. $5a\,(-3a + 13)$

4. $9x\,(6x - 2)$

5. $\frac{2x}{3}\,(12x + 18)$

6. $\frac{4a}{5}\,(10a - 25b)$

7. $\frac{-4x}{11}\,(121x + 22)$

Set

8. Create standard mathematical representations (table, graph, equations) that relate the figure number to the number of squares for the sequence of figures. Find the number of squares for Figure 4.

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Figure 1

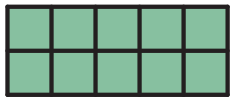


Figure 2

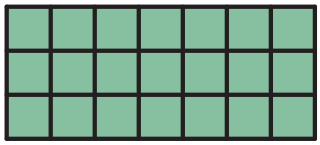
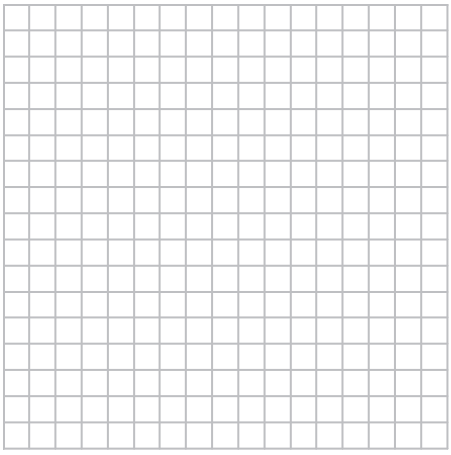


Figure 3

Figure Number	Number of Squares
1	
2	
3	
4	



Equations:

9. How does the rate of change for the relationship in problem 8 show up in the table? Explain.

10. How do the terms in the equations connect with the diagrams provided?

Go

Identify the rate of change in each of these contexts or representations of linear functions.

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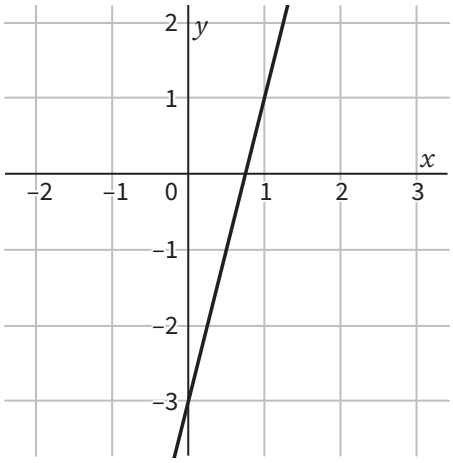
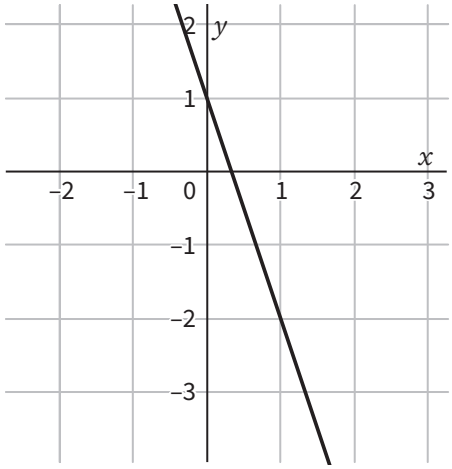
11.



12.



13.

x	$f(x)$
25	65
26	68
27	71
28	74

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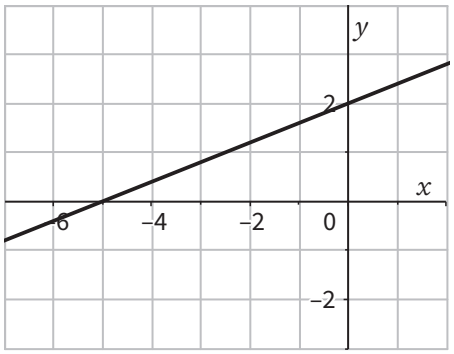
14. $f(0) = 7;\ f(n+1) = f(n) + 5$

15.



16. Slope of $\overleftrightarrow{AB}$

$A(-3, 12)\quad B(-11, -16)$

17. George is loading freight into an elevator. He notices that the weight limit for the elevator is $1{,}000$ lbs. He knows that he weighs 210 lbs. He has loaded 15 boxes into the elevator. Each box weighs 50 lbs. Identify the rate of change for this situation.

18.

Independent Variable	4	5	6	7	8
Dependent Variable	5	5.5	6	6.5	7

19. $f(-4) = 24$ and $f(6) = -36$