

Name: _____ Period: _____ Due: _____

Score: ___ / ___
 Percent: _____ = $\frac{\quad}{10}$

ASSIGNMENT 5-4
HERE COMES THE RULE

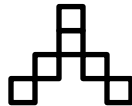
PROPORTIONALITY

SYW: NO WORK = NO CREDIT
WORK IN PENCIL ONLY!

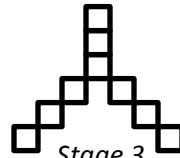
1. Use the pattern below to answer the questions that follow.



Stage 1



Stage 2

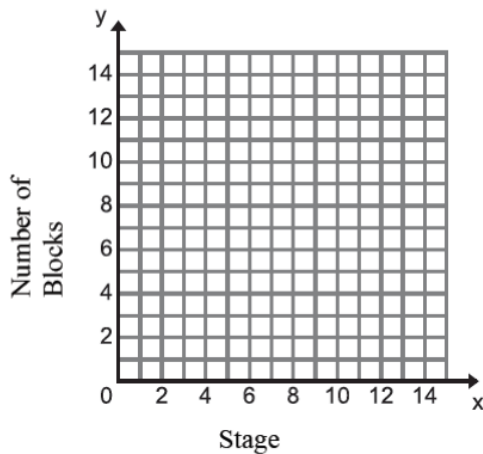


Stage 3

- Draw stage 4 in the space above.
 - How many new blocks are added to the pattern from one stage to the next? _____
 - How many blocks are in stage 4? Stage 10? Stage 100?
- d. Our next goal is to write a rule (equation) that gives the number of blocks (b) for any stage number (s). To do this, fill out the table below.

Stage (s)	Pattern	# of Blocks (b)	Short Hand (SH)
0			
1			
2			
3			
4			
s			

e. Graph the relationship.



f. Is the relationship proportional? Explain how you know using the...

1. Table: _____

2. Graph: _____

3. Equation: _____

2. Use the proportional table to the right to answer the following questions.

- Fill in the missing values in the table.
- How many cookies would there be if there were 10 students? _____
100 Students? _____
- What is the Constant of Proportionality (unit rate per student)? _____
- What equation models this proportional relationship? _____

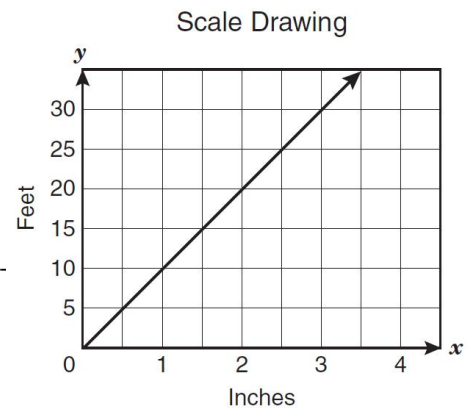
Students (x)	Cookies (y)
0	
1	
2	3
3	
4	6
5	
6	9
x	

3. Use the graph to the right to answer the following questions.

- Make a table for the graph.

Inches	0			3
Feet		10	20	

- Write the Equation for the graph to the right. _____



Review Problems

Factor the following expressions.

- $7x + 21 =$ _____
- $6x + 15 =$ _____
- $9x - 81 =$ _____

Expand each expression below.

- $4(x - 12) =$ _____
- $-8(y + 7) =$ _____
- $-9(2x - 5) =$ _____

Challenge Problems

- Write the equation for the table at the right. _____
- How much would you earn if you babysat for 3.5 hours? _____

McBride Babysitting Rates	
Hours	Money Earned
0	\$3
1	\$5
2	\$7
3	\$9
4	\$11
10	\$23
15	\$33