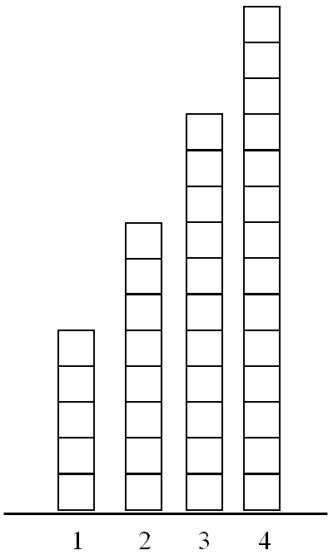
Notes: Linear Growth using Stacking Towers

slope – intercept form of a line : $y = mx + b$

in other words . . . $y = (change)x + beginning$

Example 1:

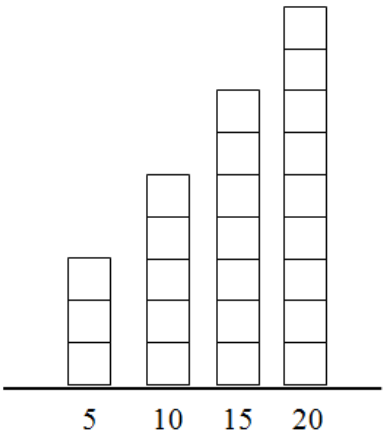


How is the pattern changing **(*m*)** ? _____ $\frac{vertical\ change}{horizontal\ change}$

How many piece(s) were there in the beginning - step 0 **(*b*)** ? _____

Write an equation $y = \mathbf{m}x + \mathbf{b}$ to represent the pattern _____

Example 2:



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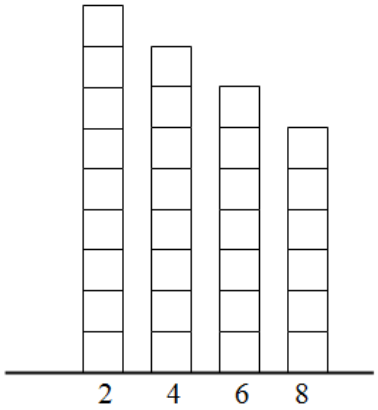

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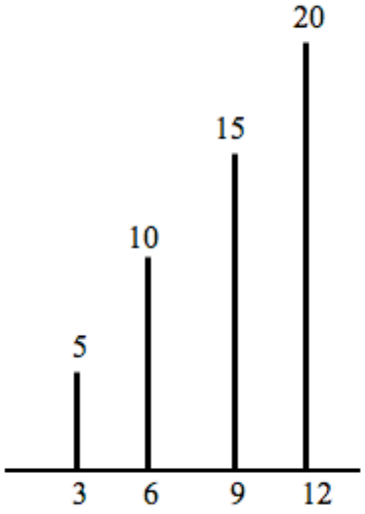
Example 4:



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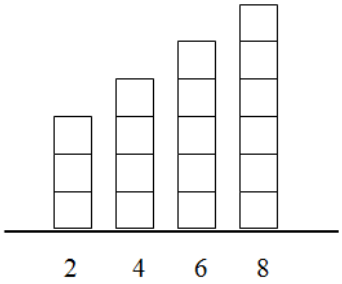
Write an equation $y = \mathbf{m}x + \mathbf{b}$ to represent the pattern _____

Name: _____

Period: _____ Date: _____

Assignment: Linear Growth using Stacking Tower

Problem 1:



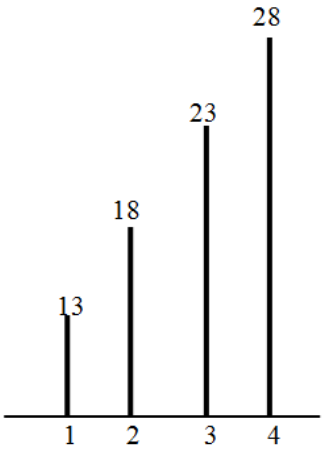
How is the pattern changing **(*m*)** ? _____ $\frac{\textit{vertical change}}{\textit{horizontal change}}$

How many piece(s) were there in the beginning - step 0 **(*b*)** ? _____

Write an equation $y = \mathbf{m}x + \mathbf{b}$ to represent the pattern _____

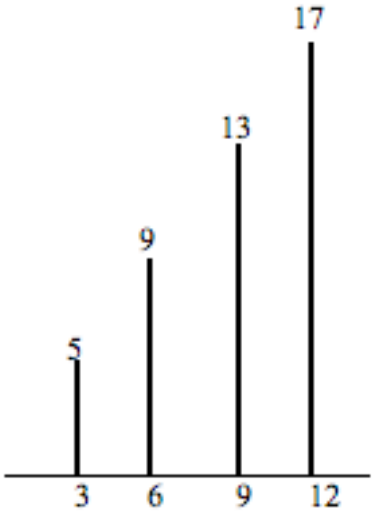
Write Equations for each linear growth pattern.

Problem 2:



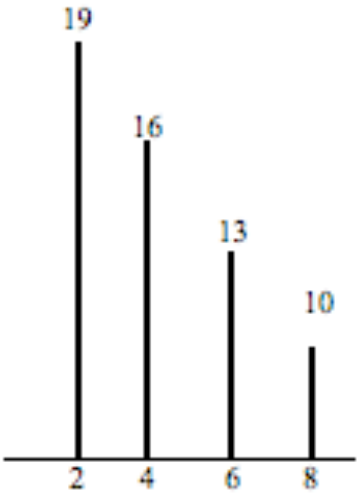
Equation: _____

Problem 3:



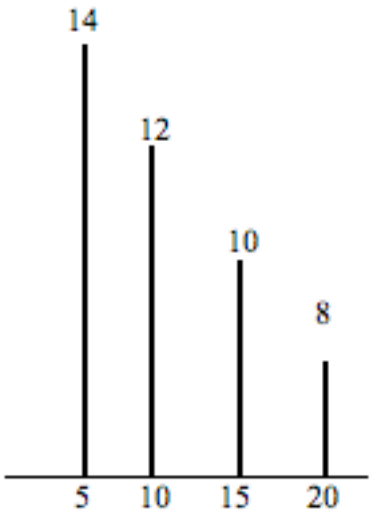
Equation: _____

Problem 4:



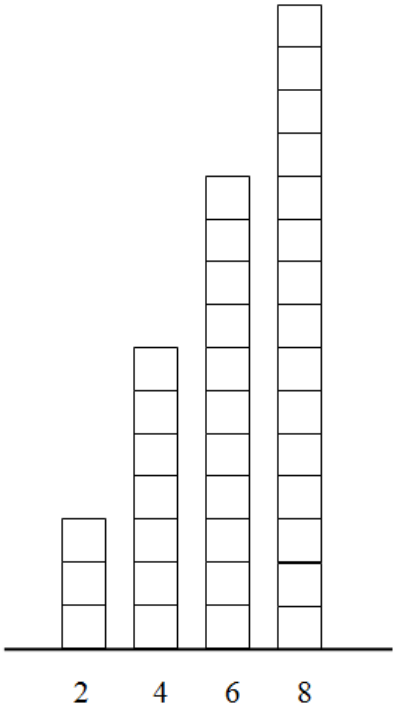
Equation: _____

Problem 5:



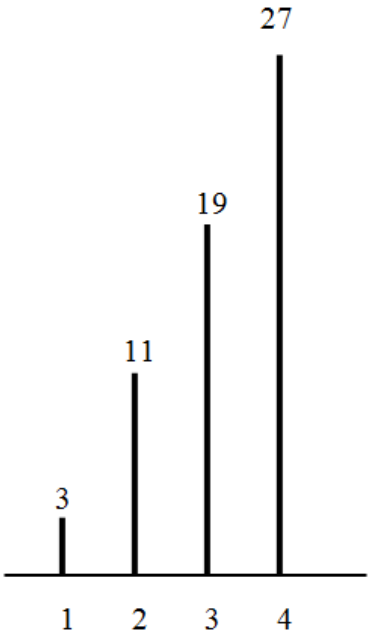
Equation: _____

Problem 6:



Equation: _____

Problem 7:



Equation: _____

Create **3** drawings of linear growth patterns.

One must have a positive slope and one must have a negative slope.

Problem 8:

Equation: _____

Problem 9:

Equation: _____

Problem 10:

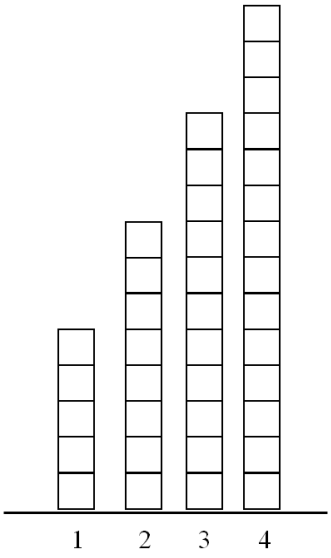
Equation: _____

Notes: Linear Growth using Stacking Towers

slope – intercept form of a line : $y = mx + b$

in other words . . . $y = (change)x + beginning$

Example 1:

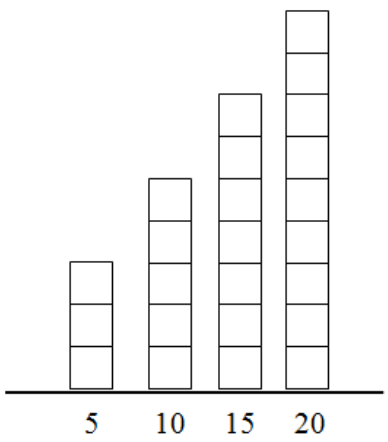


How is the pattern changing **(*m*)** ? ___ $\frac{3}{1}$ ____ $\frac{vertical\ change}{horizontal\ change}$

How many piece(s) were there in the beginning - step 0 **(*b*)** ? ___ 2 ____

Write an equation $y = \mathbf{m}x + \mathbf{b}$ to represent the pattern ___ $y = \frac{3}{1}x + 2$ ___

Example 2:

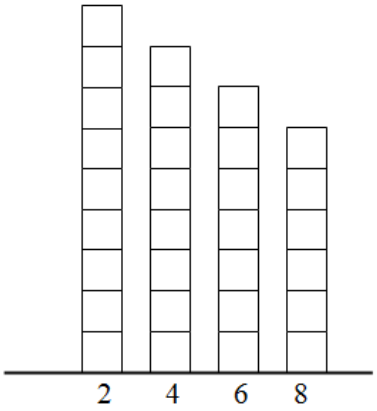


How is the pattern changing **(*m*)** ? ___ $\frac{2}{5}$ ____ $\frac{vertical\ change}{horizontal\ change}$

How many piece(s) were there in the beginning - step 0 **(*b*)** ? ___ 1 ____

Write an equation $y = \mathbf{m}x + \mathbf{b}$ to represent the pattern ___ $y = \frac{2}{5}x + 1$ ___

Example 3:



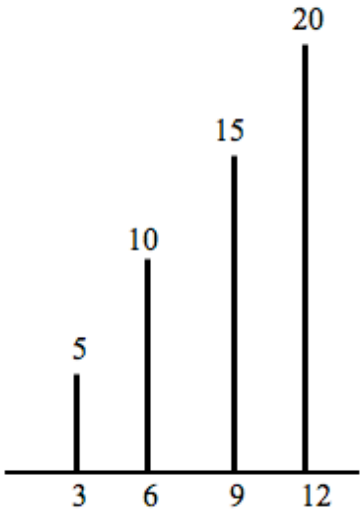
$\frac{\textit{vertical change}}{\textit{horizontal change}}$

How is the pattern changing **(*m*)** ? ___ $-\frac{1}{2}$ ____

How many piece(s) were there in the beginning - step 0 **(*b*)** ? ___ 10 ____

Write an equation $y = \mathbf{m}x + \mathbf{b}$ to represent the pattern ___ $y = -\frac{1}{2}x + 10$ ___

Example 4:



How is the pattern changing **(*m*)** ? ___ $\frac{5}{3}$ ____

How many piece(s) were there in the beginning - step 0 **(*b*)** ? ___ 0 ____

Write an equation $y = \mathbf{m}x + \mathbf{b}$ to represent the pattern _ $y = \frac{5}{3}x + 0$ ___

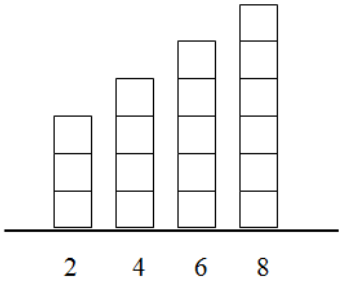
or $y = \frac{5}{3}x$

Name: _____

Period: _____ Date: _____

Assignment: Linear Growth using Stacking Tower

Problem 1:



$\frac{\text{vertical change}}{\text{horizontal change}}$

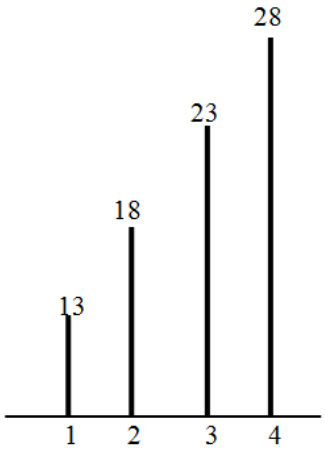
How is the pattern changing **(*m*)** ? ___ $\frac{1}{2}$ ____

How many piece(s) were there in the beginning - step 0 **(*b*)** ? ___ 2 _____

Write an equation $y = \mathbf{m}x + \mathbf{b}$ to represent the pattern_ $y = \frac{1}{2}x + 2$ ___

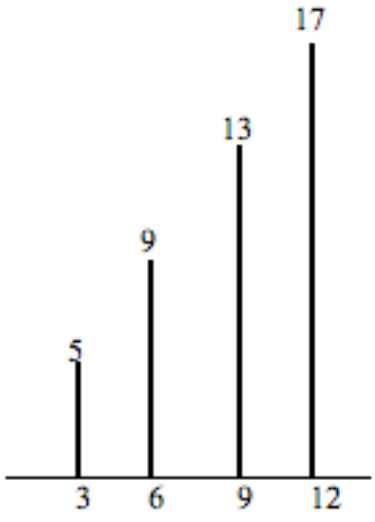
Write Equations for each linear growth pattern.

Problem 2:



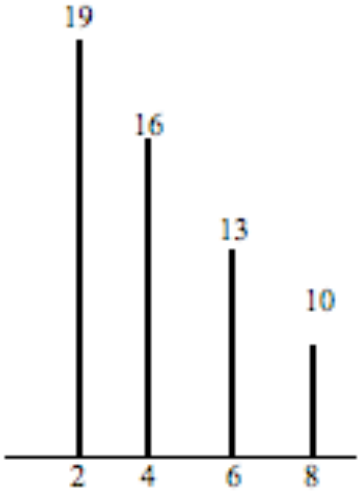
Equation: _ $y = \frac{5}{1}x + 8$ __

Problem 3:



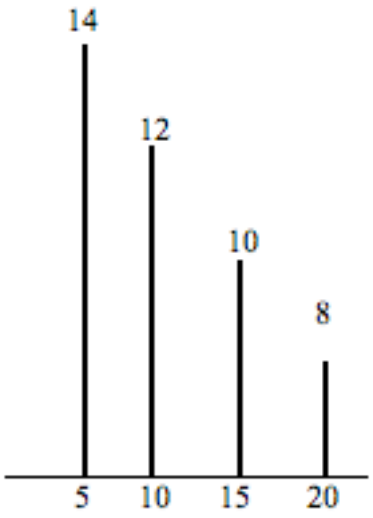
Equation: _ $y = \frac{4}{3}x + 1$ __

Problem 4:



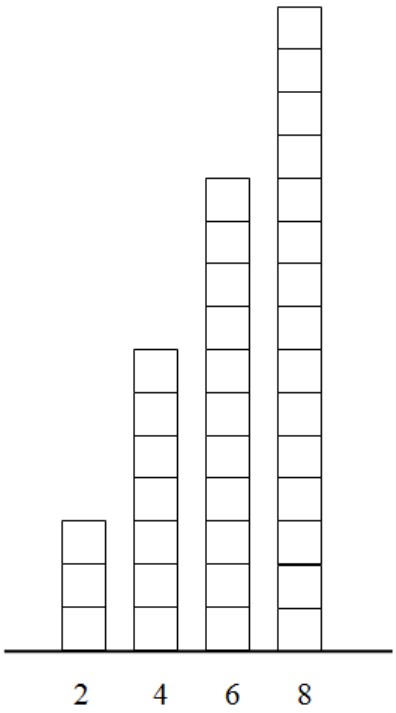
Equation: _ $y = \frac{-3}{2}x + 22$ __

Problem 5:



Equation: _ $y=\frac{-2}{5}x+16$ __

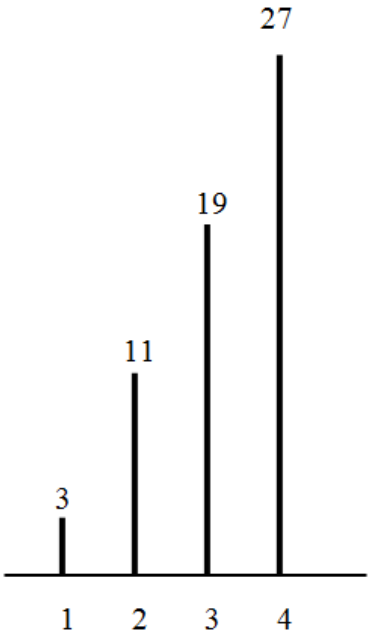
Problem 6:



Equation: _ $y=\frac{4}{2}x+(-1)$ __

_ $y=\frac{2}{1}x-1$ __

Problem 7:



Equation: _ $y=\frac{8}{1}x+(-5)$ __

_ $y=\frac{8}{1}x-5$ __

Create 3 drawings of linear growth patterns.

One must have a positive slope and one must have a negative slope.

Problem 8:

Equation: _____

Problem 9:

Equation: _____

Problem 10:

Equation: _____