MARTIN'S math club Season 3

Lesson Plan

8th Grade

Expressions, Equations, and Inequalities

"Go for the 3 Pointer!"

Objective:

By the end of the lesson/activity, the students will be able to:

- Create a an equation (in slope-intercept form) and graph for a given slope and y-intercept.

Materials:

- "Go for the 3 Pointer" activity sheet
- "Go for the 3 Pointer" activity cards

Teacher Preparation:

- Group the students into pairs or groups of three.
- Copy the activity sheet and cards for each group.

Activity:

1. Have the students mix and face each activity card face down.
2. One at a time, the players will need to choose two cards.
3. Once a player chooses a set of cards (one slope and one y-intercept), the player will need to record the information on his/her sheet. To earn two points, he/she must write the information in slope-intercept.
4. If a player does not choose one of each type of card, the turn is lost. The player will need to flip the cards back over and allow the next player to try.
5. Players can earn the additional third point by graphing the slope and y-intercept chosen.
6. The player with the most points wins!

The teacher serves as a facilitator, helping students throughout the game.

South Carolina College- and Career-Ready Standards for Mathematics:

8.EEI.6 Apply concepts of slope and *y*-intercept to graphs, equations, and proportional relationships.

1. Explain why the slope, m, is the same between any two distinct points on a non-vertical line using similar triangles.
2. Derive the slope-intercept form ($y = mx + b$) for a non-vertical line.
3. Relate equations for proportional relationships ($y = kx$) with the slope-intercept form ($y = mx + b$) where $b = 0$.

Extensions:

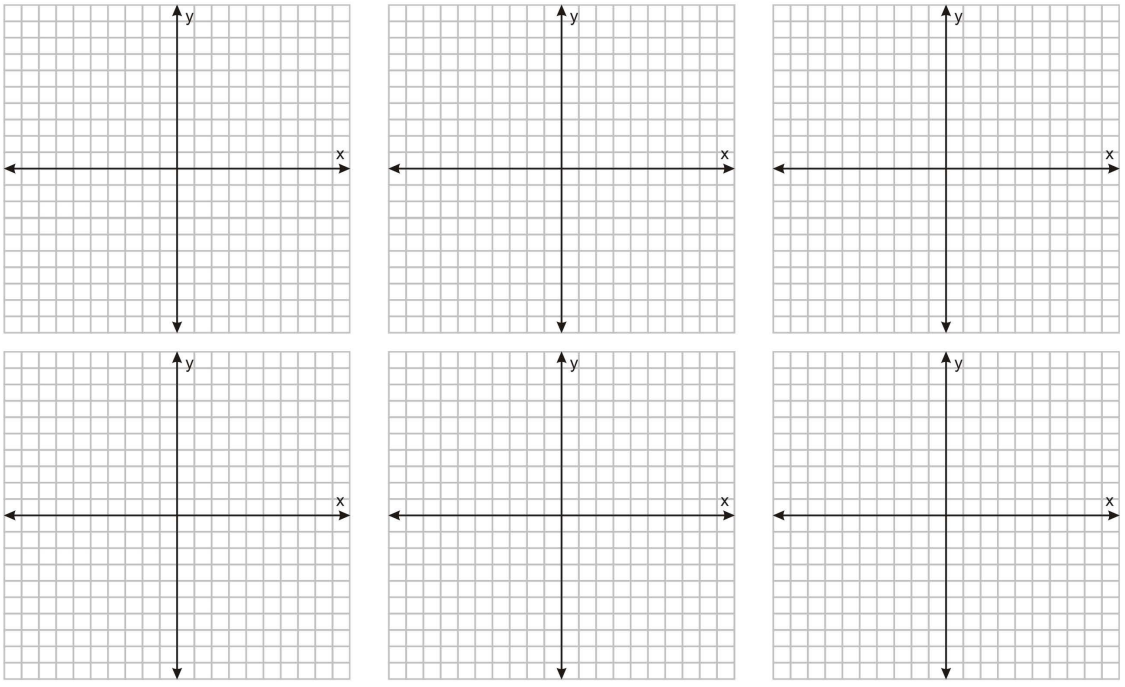
- The teacher can make graphing the equations mandatory during the game and have the students identify whether the graph displays a proportional relationship.
- The teacher can create additional, more challenging numbers for advanced students.

Name: _____ Date: _____ Period: ___

Go for the 3 Pointer!

Directions: Match the cards for 2 points. Create the appropriate graph to earn a bonus point.

	Player Name:		Player Name:		Player Name:	
Problem	Slope & Y-intercept	Slope Intercept Form Equation	Slope & Y-intercept	Slope Intercept Form Equation	Slope & Y-intercept	Slope Intercept Form Equation
1						
2						
3						
4						
5						
6						



$$m = 1.5$$

slope

$= 1/3$

slope

$= -4$

slope

$= 2/5$

$$m = -\frac{1}{2}$$

$$n = 1$$

y-intercept

$= 0$

y-intercept

= 2

y-intercept

$= -1$

$$b = o$$

$$b = 4$$


b = 4