

Exploring Linear Equations

TI-Nspire™ Student Worksheet

Name _____

Directions: Use the questions on this worksheet to guide you through your exploration of the linear equations. Answer the questions as you explore.

Linear Equation:

1. Use the Nav Pad to move the pointer to any point on \overleftrightarrow{cd} , but not at c or d , until \overleftrightarrow{cd} is highlighted. Push ctrl Ⓢ to grab \overleftrightarrow{cd} . Use the Nav Pad to move the line around the screen. Answer the following questions.
2. What do you notice about the values in the equation and the values of the identified slope and y-intercept?
3. Where in the equation do you see the value of the slope?
4. Where in the equation do you see the value of the y-intercept?
5. The equation and the line you started with had a positive slope. Did you see an equation while you were moving the line around that had a negative slope? Move the line around until you have a negative slope.
6. Describe the difference in the graph of a line with a negative slope as compared to the line with the positive slope.
7. Describe the change in the relationship of the slope and y-intercept to the equation of the line with a negative slope.
8. Push esc to release the grab tool. Use the Nav Pad to now point and highlight point d . Push ctrl Ⓢ to grab d . Move point d up and down using the Nav Pad.
9. Explain how this movement affects the slope, y-intercept and equation of the line?
10. Based on your explorations, what general statement(s) can you make about the equation of a line and what it tells you about the slope and y-intercept of the line?
11. Discuss your findings with the class.