

# Linear Equations

## State Equation from Graph of a Line



## Real World Linear Equation Worksheet and Activity

**Part I.** Model Problems

**Part II.** Practice Problems

(answers can be found [here](#))

**III.** Think Pair Share and Activity

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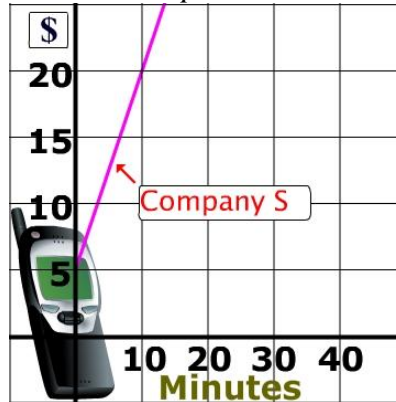
**TEACHERS:** Feel free to make copies of this worksheet for the sole purpose of use in your own classroom. ENJOY!!! Redistribution in any other form is prohibited.

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<http://www.mathwarehouse.com/classroom/free-math-printable-worksheets.php>

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**Do No**→ What is the slope of the line in the picture below?



What does 'm' and 'b' stand for in the equation below?

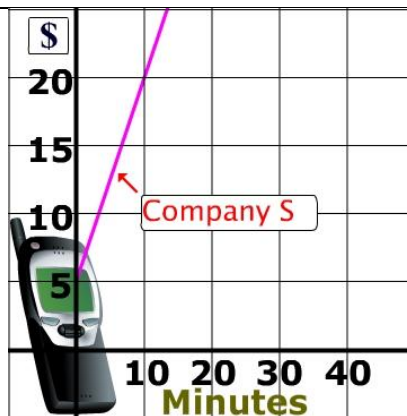
$$y = mx + b$$

**What is the y-intercept of the line in the do now?**

1) What is the y-intercept of the equation of the company's rate below? (what is the line's y-intercept)

What is the slope of the line below?

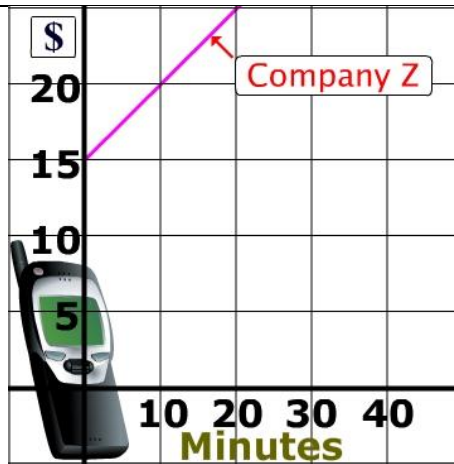
What is the equation of this line?



2) What is the y-intercept of the equation of the company's rate below? (what is the line's y-intercept)

What is the slope of the line below?

What is the equation of this line?



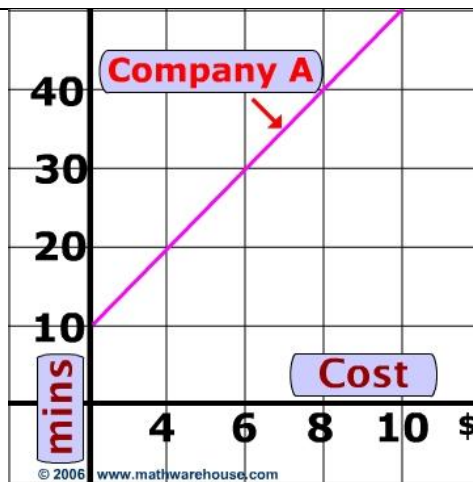
**Part II. Practice on your own**

Answers to these problems can be found at [mathwarehouse.com/lines2](http://mathwarehouse.com/lines2)

- 1) What is the y-intercept of the equation of the company's rate below? (what is the line's y-intercept)

What is the slope of the line below?

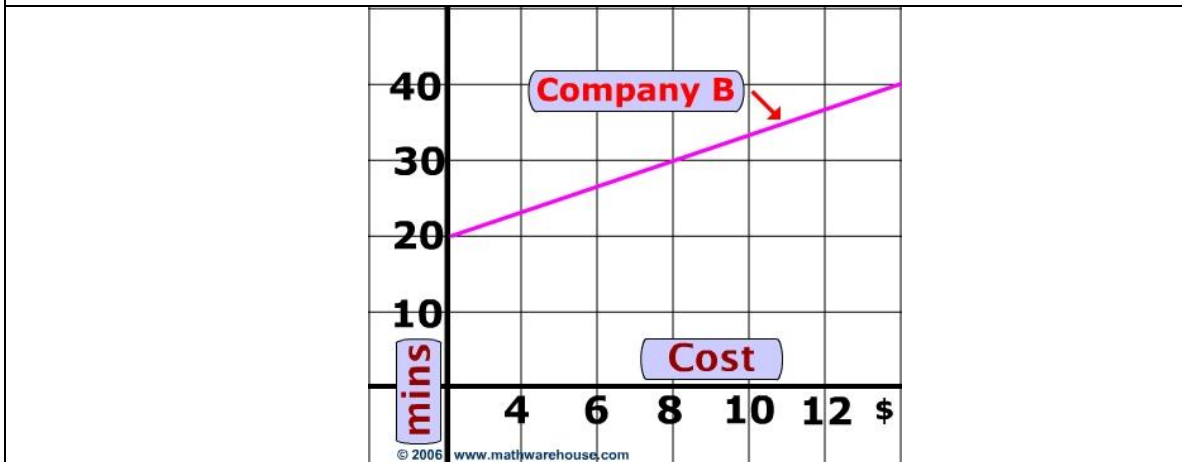
What is the equation of this line?



2) What is the y-intercept of the equation of the company's rate below? (what is the line's y-intercept)

What is the slope of the line below?

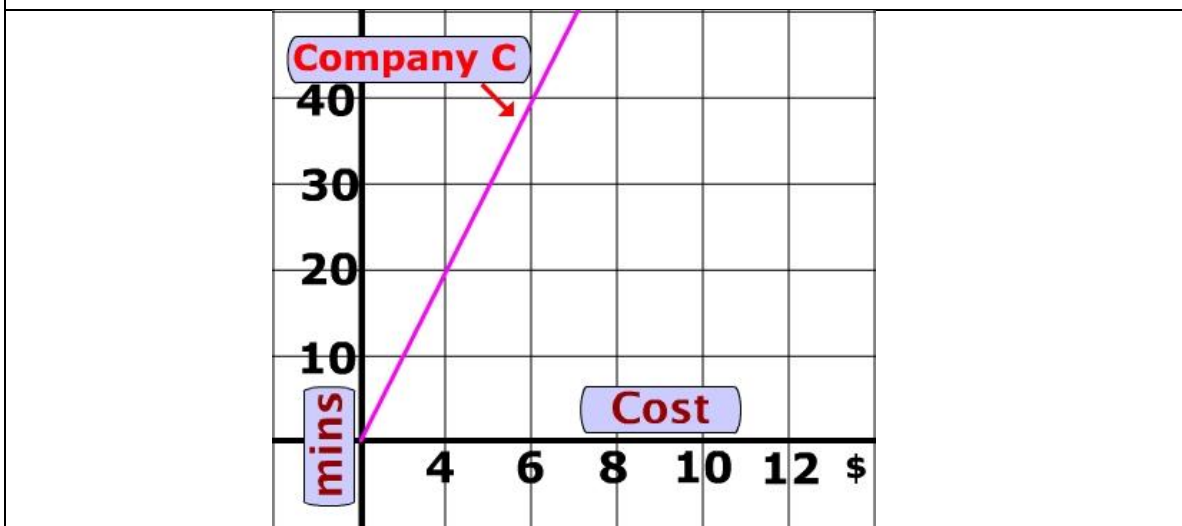
What is the equation of this line?



3) What is the y-intercept of the equation of the company's rate below? (what is the line's y-intercept)

What is the slope of the line below?

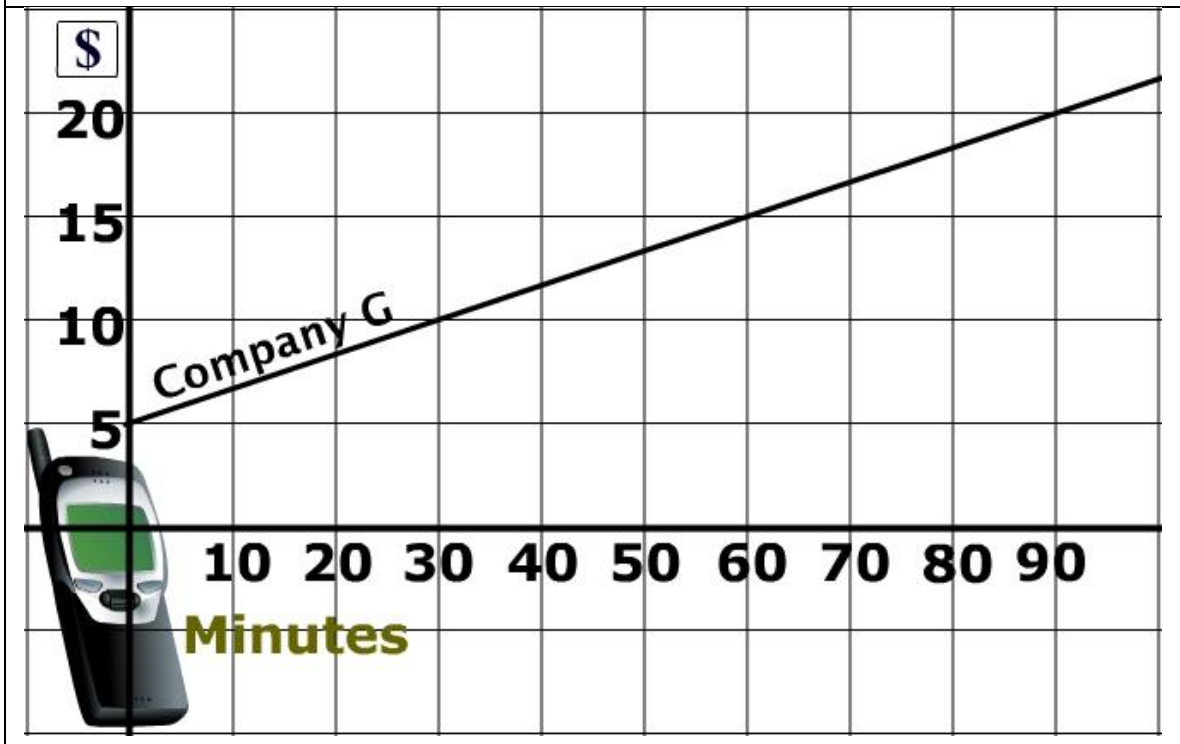
What is the equation of this line?



4) What is the y-intercept of the equation of the company's rate below? (what is the line's y-intercept)

What is the slope of the line below?

*What is the equation of this line?*



**Complete the following sentences:**

8. The greater the slope of a company's rate is, the \_\_\_\_\_.

9. The smaller the slope of a company's rate is, the \_\_\_\_\_.

10. Why wouldn't the graph of a company's rate have a slope of 0? \_\_\_\_\_

**Think-Pair-Share**

Would the slope of a company's rate ever be negative? \_\_\_\_\_

Why or Why not?

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What is the connection between slope and the rate of a company?

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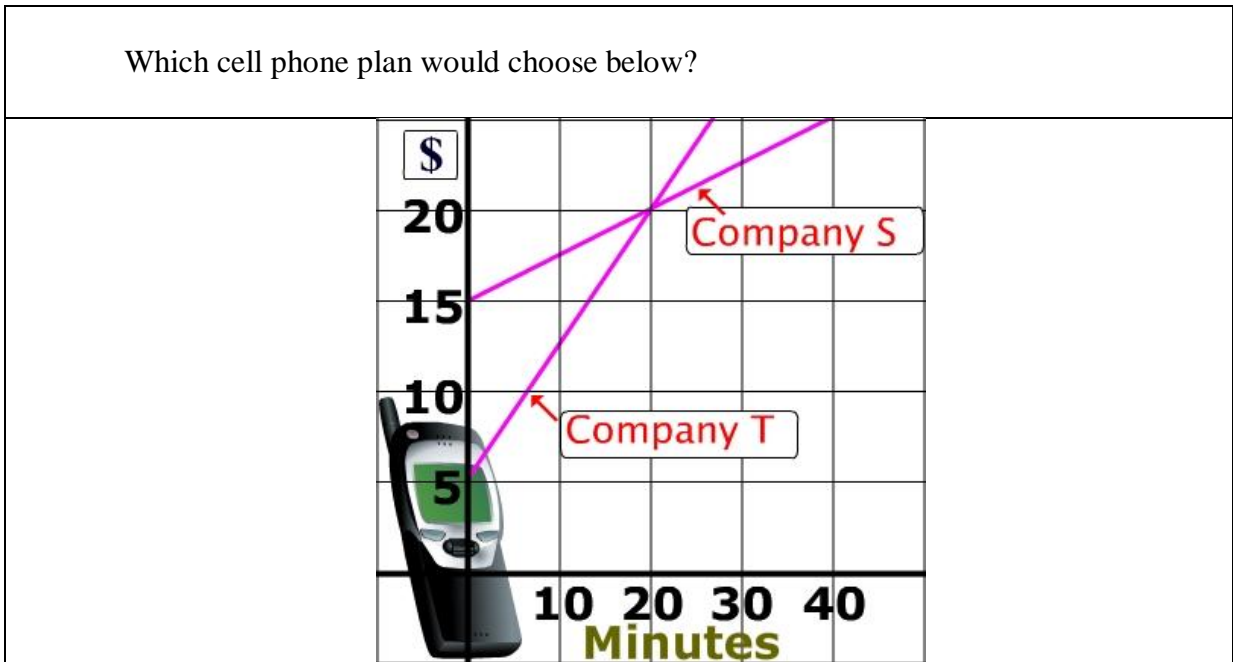
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# Activity

The table below represents the monthly rate of two cell-phone companies.

Which cell phone plan would choose below?



If you chose a plan for yourself, which one would you use and why?

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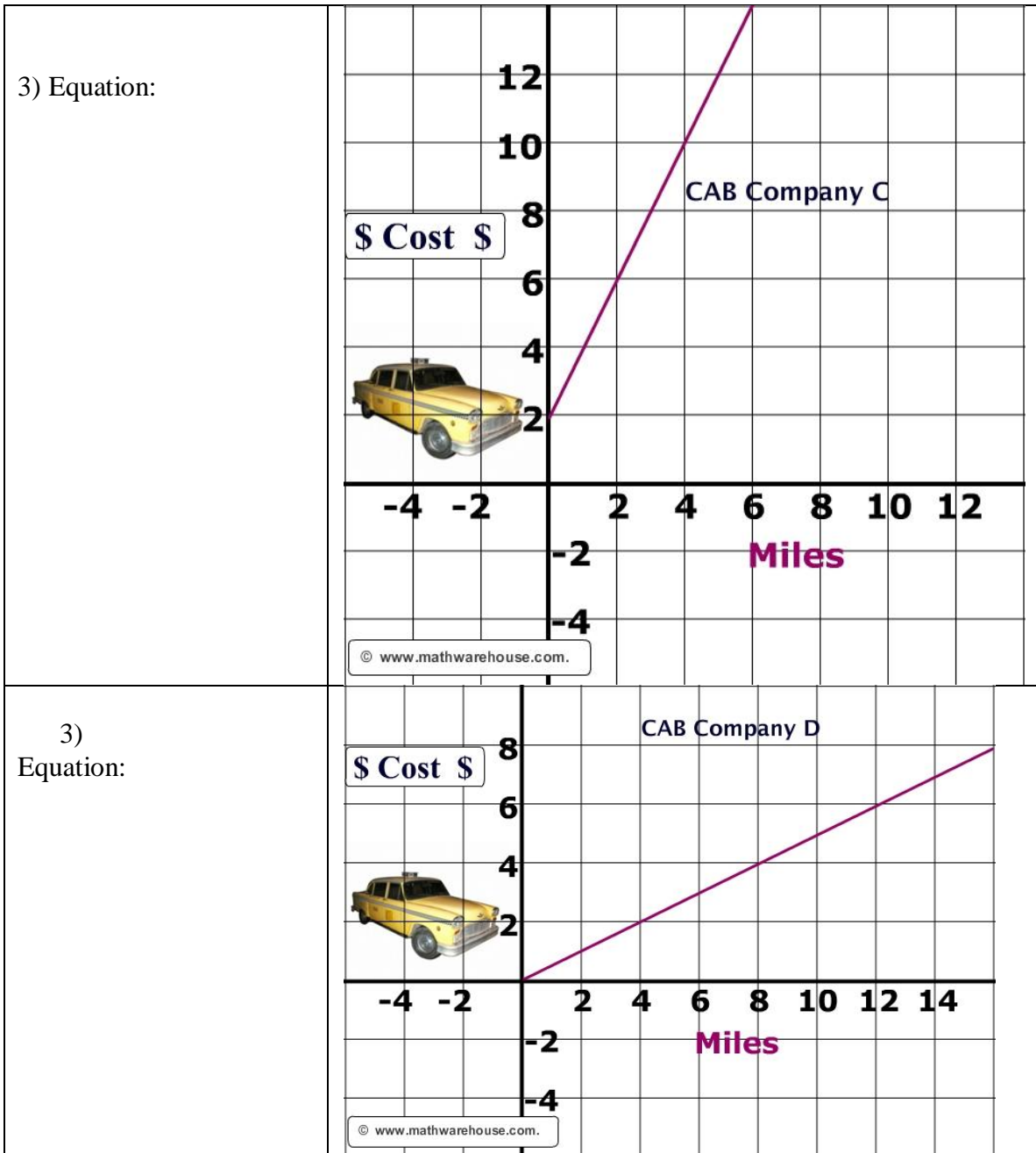
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**Homework:**

What is the equation of the lines below?

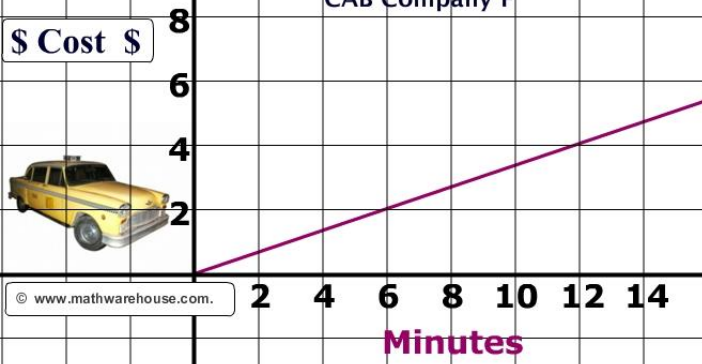
- 1) Calculate the slope of a line through the points (4,6) and (8, 12)
- 2) Calculate the slope of a line through the points (5,12) and (7, 15)





5)

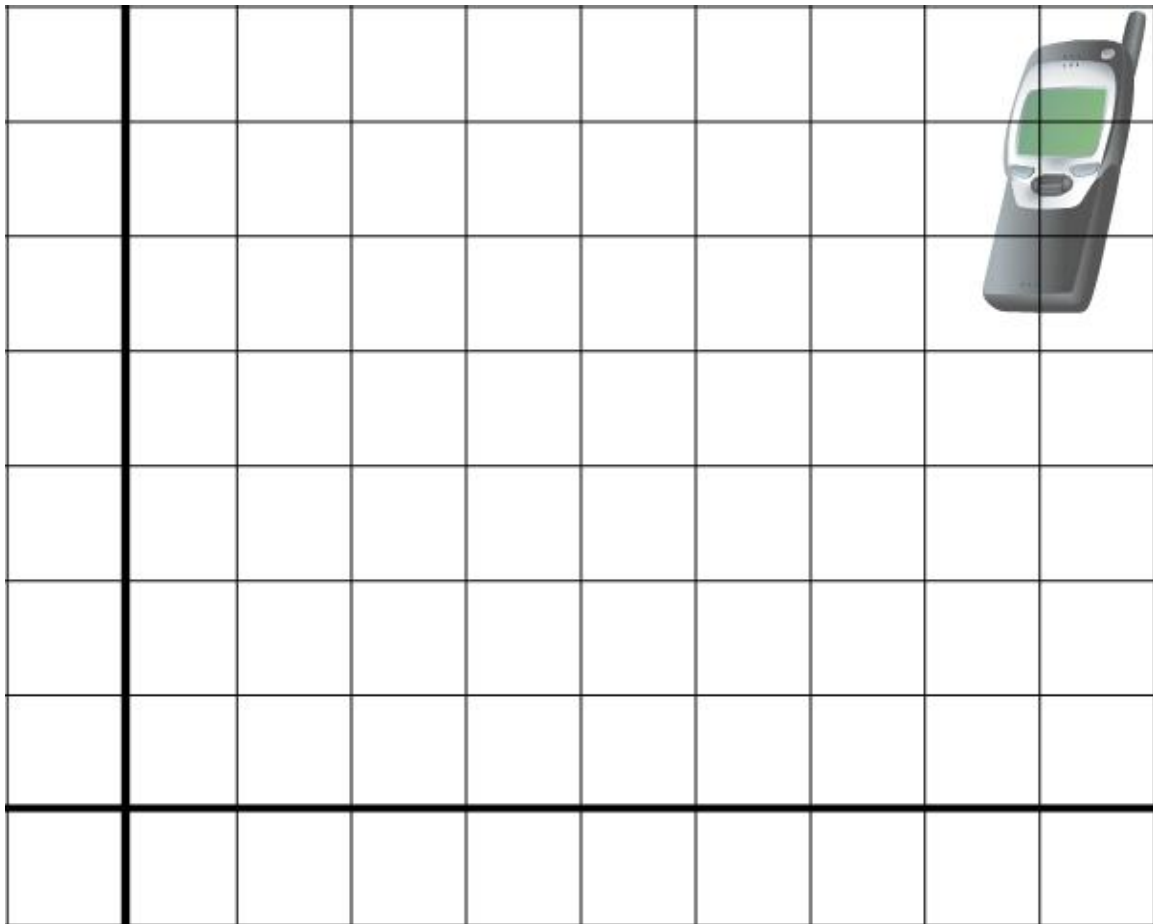
Equation:



**12.** A deluxe phone company charges a \$200 flat fee in addition to its hourly rate of \$100 per hour. (This cell phone company offers unprecedented, technology breakthroughs such as the ability to communicate with your car among other James-Bond-like capabilities, which is why the company can charge so much)

Use the blank graph below to draw a graph of this company's rate. You need to label both axes.

## Graph



**Linear Equation Resources**

[http://www.mathwarehouse.com/algebra/linear\\_equation/real-world/equation-from-graph.php](http://www.mathwarehouse.com/algebra/linear_equation/real-world/equation-from-graph.php)

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## Slope Resources

- 1) [Slope of a Line](http://www.mathwarehouse.com/algebra/linear_equation/slope-of-a-line.php) : [http://www.mathwarehouse.com/algebra/linear\\_equation/slope-of-a-line.php](http://www.mathwarehouse.com/algebra/linear_equation/slope-of-a-line.php)
- 2) [Interactive Slope](http://www.mathwarehouse.com/algebra/linear_equation/slope-of-a-line.php): [http://www.mathwarehouse.com/algebra/linear\\_equation/slope-of-a-line.php](http://www.mathwarehouse.com/algebra/linear_equation/slope-of-a-line.php)
- 3) [Slope Intercept Form](http://www.mathwarehouse.com/algebra/linear_equation/slope-intercept-form.php) of a line:  
[http://www.mathwarehouse.com/algebra/linear\\_equation/slope-intercept-form.php](http://www.mathwarehouse.com/algebra/linear_equation/slope-intercept-form.php)
- 4) Common Slope Errors (interactive online activities)
  - a. [http://www.mathwarehouse.com/algebra/linear\\_equation/slope/slope\\_dilemma8.html](http://www.mathwarehouse.com/algebra/linear_equation/slope/slope_dilemma8.html)
  - b. [http://www.mathwarehouse.com/algebra/linear\\_equation/slope/2nd-slope\\_dilemma8.htm](http://www.mathwarehouse.com/algebra/linear_equation/slope/2nd-slope_dilemma8.htm)

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