Name That Line
Worksheet Instructions

Follow the instructions on the bulletin board to get you started. You will need to fill in the first four columns on the worksheet while at the bulletin board. The remainder of the worksheet can be completed at a later time. You may use a calculator to complete the worksheet.

You will receive one homework pass for completing this activity and handing in your worksheet. You can receive a maximum of two homework passes, by completing this activity on two separate occasions, before the test on Chapter 3 on Linear Equations.

How to complete the worksheet:

1) Record the required information obtained during your bulletin board session onto the table.
   Optional: Coordinate axes are provided on the back of the worksheet for you to draw sketches of the points and lines you selected.

2) Determine the equation of the line using the slope-intercept form.

3) Using the ordered pairs, calculate the slope. Show your work in the box.

4) Write the equation of the line in standard form, showing your work in the box.

5) Using the standard form determine the actual y-intercept.

Perform these steps for all six sets of ordered pairs.

Then answer the questions on the second page of the worksheet.
Name That Line
Worksheet

<table>
<thead>
<tr>
<th>Point A</th>
<th>Point B</th>
<th>Observed y-intercept</th>
<th>$y = mx + b$ (from observed)</th>
<th>Calculated Slope</th>
<th>$Ax + By = C$</th>
<th>Actual y-intercept</th>
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</table>
Name That Line
Summary Questions

After completing the worksheet for all six lines answer the following questions:

1) How accurate do you feel the graphical method is for determining slope and \(y\)-intercept?

2) Describe the ordered pairs, the slope and the \(y\)-intercept of a horizontal line.

3) Describe the ordered pairs, the slope and the \(y\)-intercept of a vertical line.

4) What did all your positively sloped lines have in common?

5) What did all your negatively sloped lines have in common?

6) How is the slope and \(y\)-intercept derived from the equation of a line in standard form?