Name: _____   Date: _____

Use Technology: Use the TI-83 Plus or TI-84 Graphing Calculator to Explore Parallel and Perpendicular Lines
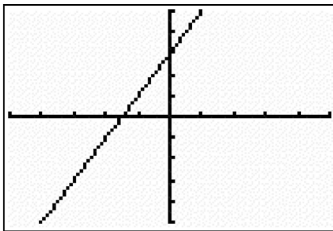
These instructions are provided for the TI-83 Plus and TI-84 graphing calculators.

With the TI-83 Plus, enter **Y1=2x+3**, and you'll be directed to construct a second equation that is parallel and perpendicular by trial and error in **Y2**.

If you are using a TI-84, this process is even richer because of the inclusion of **Manual-Fit Curve** (**STAT**, right arrow to **CALC**, up arrow to **Wrap to Manual-Fit**). Enter **Y1=2x+3**, and then use the **Manual-Fit** tool to construct a parallel line.

You may not get the exact same slope on the first try, but you will see that there is a slope close to 2 that emerges. With this type of fit, you have the opportunity to change the slope and see the resulting effect. You can do the same with perpendicular lines if you **ZOOM-SQUARE** your windows first. The perpendicular slopes come out very close to –5. Do several examples, and see if there is a pattern. Sample screen captures are shown below.

Principles of Mathematics 9: Teacher's Resource
**BLM 6.UT.2 Use Technology: Use the TI-83 Plus or TI-84
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