

Exploring Parallel and Perpendicular Lines Teacher

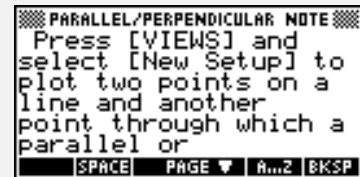
For the

Objectives:

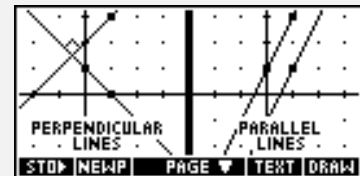
Using the **PARALLEL/PERPENDICULAR** applet, the student will write the equation of a line parallel or perpendicular to a given line through a given point.

Functionality:

When the student presses **START**, the **PARALLEL/PERPENDICULAR NOTE** will be displayed.



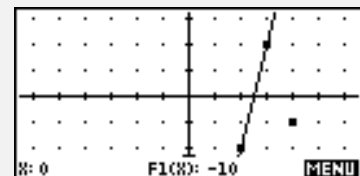
The student should then view the **SKETCH** for a visual explanation.



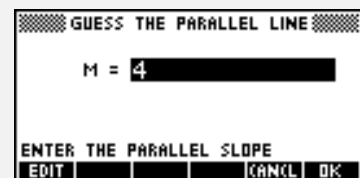
After viewing the note and sketch, the student should press the **VIEWS** key to setup a new problem, to enter an equation for a line parallel to the given line, or to enter an equation for a line perpendicular to the given line.



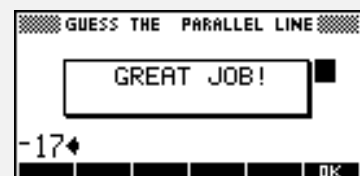
Pressing **New Setup** will generate a line with two defined points and a third point through which the student's line should pass.



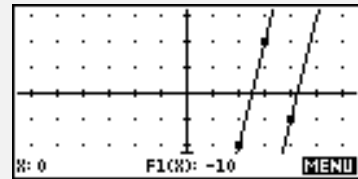
When accessing the choices **Parallel** or **Perpendicular**, the student will be prompted for a value for the slope, **M**, and the y-intercept, **B**, of the line.



GREAT JOB! will be displayed when the student is correct. If M or B is incorrect then a message box will appear notifying the student which information is correct.



Immediately following the message box, the original problem and the student's line will be displayed.



Ideas can be applied to:

Algebra I, Algebra II, Precalculus

Programs associated with this applet:

.PERP.3PTS, .PERP.PER, .PERP.PAR, .PERP.ST, .PERP.SV

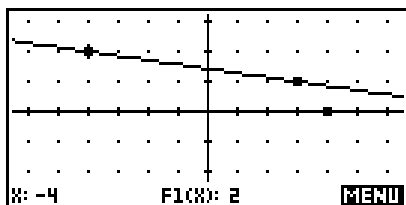
Parallel and Perpendicular Lines

Name _____

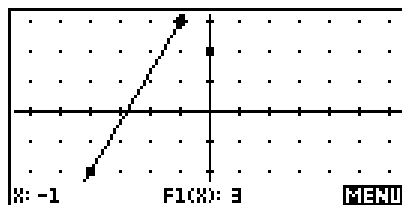
Date _____

- I. For each of the following graphs, write the equation of the line that is given and the equation of the line that is parallel to the given line through the given point. Show your work. Place your answer in the box provided.

1.



2.



Original line:

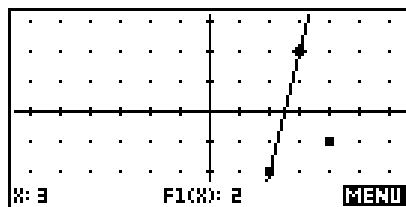
Original line:

Parallel line:

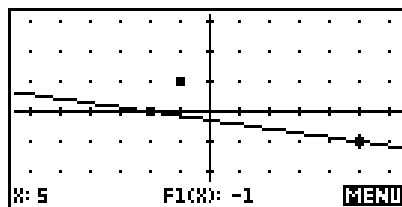
Parallel line:

- II. For each of the following graphs, write the equation of the line that is given and the equation of the line that is perpendicular to the given line through the given point.

3.



4.



Original line:

Original line:

Perpendicular

Perpendicular

