**Perpendicular Lines Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date \_\_\_\_\_\_\_ Hour \_\_\_**

**Slope and Equation Review**

1) Calculate the equation of the line which passes through G(-7, 4) and H(8,-2)

 a) Plot the points. Is the slope positive or negative? \_\_\_\_\_\_\_\_\_\_\_\_\_

 b) Calculated Slope of GH =

 c) Plug coordinates and slope into slope-intercept form

 y = m(x) + b

 d) Solve for y-intercept (b). Does it look right?

 e) Write the equation as y = #x + # : \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

2) Calculate the equation of the line which is perpendicular to the first line, and goes through the point (-4,‑3).

 a) Sketch the new line lightly in pencil. Where does it appear to hit the y-axis?

 b) Slope of ┴ line = \_\_\_\_\_\_\_\_

 c) You know the slope and a point on the new line, so use the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 form of a linear equation, which has the form \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 d) Plug in m and use (-4,-3) as (x1, y1). There! You have the point-slope form of the equation!

 e) Now, solve that for y in order to convert it to y = mx + b (slope-intercept) so you can check to see if the intercept matches your earlier estimate.