

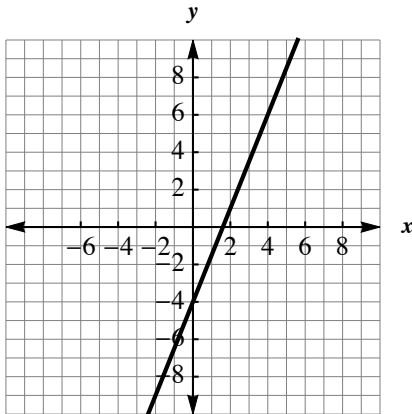
Homework #1

First & Last Name: _____

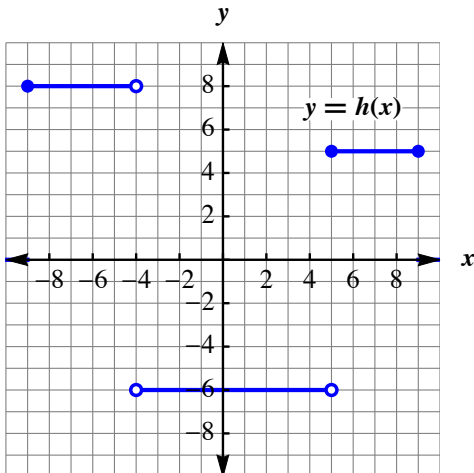
Class: _____

For homework to be graded, it must be *fully completed*. This means you must **show your work**.

- Determine the intercepts of the line $4x - 5y = 11$.
- What is the equation of the line that has an x -intercept of -3 and a y -intercept of -8 ? Write your answer in both slope-intercept and point-slope forms.
- If a line goes through the points $(3.7, 5.3)$ and $(-7.1, 4.9)$ what is its slope?
- Find the equation of the line in slope-intercept form. Use exact numbers.

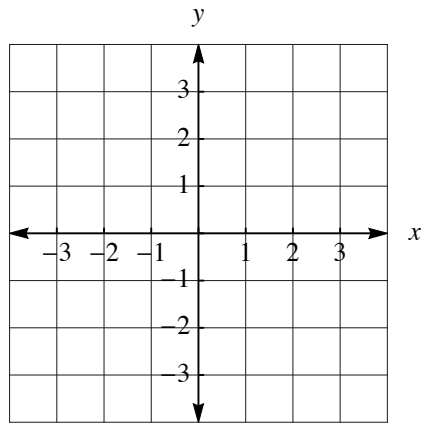


- If $f(s) = 8s - 4$, what is
 - $f(-2)$
 - $f(-1)$
 - $f(0)$
 - $f(1)$
 - $f(2)$
- [Challenge]** If $f(x) = x^2 - 2$ and $g(x) = \sqrt{x} - 2$ what is
 - $f(g(0))$
 - $g(f(0))$
 - $g(f(r))$
 - $f(g(s))$
- What is the domain and range of the function $f(x) = x^2 - 5$? Write your answers in both interval notation and set notation.
- [Challenge]** What is the domain and range of the following function? Write your answers in both interval notation and set notation.



9. Graph the piecewise function

$$g(x) = \begin{cases} -x - 3 & x < -2 \\ -2 & -2 \leq x < 1 \\ 2x - 4 & x \geq 1 \end{cases}$$



10. [Challenge] Sketch a piecewise function that has at least three non-linear parts.