ACMAT100 Spring 2025
Professor Manguba-Glover
Sections 3.3-3.5 Classwork (CW 6)   Name: _____

Complete as many of the following problems as you can. You do not have to go in order. You can use a calculator to check your work but not to solve the problems.

If **your entire table** finishes early, you may leave early.

(1) Find the slope of the line passing through the points below, or state that the slope undefined.

    (a) $(5, 3)$ and $(6, 8)$ (c) $(5, 7)$ and $(6, 9)$

    (b) $(-5, 1)$ and $(5, 5)$ (d) $(-1, 2)$ and $(5, 6)$

(2) Rewrite the given equation in slope-intercept form:

    (a) $6x - 3y - 12 = 0$ (b) $9x - 3y - 9 = 0$

(3) Find the x and y intercepts and then use them to graph the following:

    (a) $5x = 10y - 20$ (c) $3x - 4y = -12$

    (b) $-6x + 4y = 0$ (d) $f(x) = -\frac{2}{3}x + 2$

(4) Find the slope and y-intercept of the graph and use it to graph the following functions:

    (a) $f(x) = -3x$ (c) $y = \frac{2}{3}x - 4$

    (b) $h(x) = -\frac{3}{4}x + 2$

(5) Write the slope intercept form of the equation that satisfies the given conditions:

    (a) Slope is 3, passing through $(3, 5)$

    (b) Slope is -2 passing through $(-3, -6)$

    (c) Passing through $(-6, 0)$ and $(0, 6)$

    (d) Passing through $(-3, 1)$ and $(6, -2)$

(6) Write the point-slope form of the equation satisfying the given conditions. Then use the point-slope form of the equation to write the slope intercept form of the equation.

    (a) Parallel to $y = 4x$ and passing through $(4, 1)$

    (b) Perpendicular to $y = 4x$ and passing through $(1, 4)$

    (c) Passing through $(-8, 8)$ and perpendicular to the line that has an x-intercept of $(3, 0)$ and a y-intercept of $(0, -6)$.

<u>Key:</u>

(1)   (a) 5
    (b) $\frac{2}{5}$
    (c) 2
    (d) $\frac{2}{3}$

(2)   (a) $y = 2x - 4$
    (b) $y = 3x - 3$

(3) Use graphing utility to check
    (a) $(0, 2)$, $(-4, 0)$

(b) $(0, 0)$

(c) $(0, 3)$, $(-4, 0)$

(d) $(0, 2)$, $(3, 0)$

(4) Use graphing utility to check

    (a) $m = -3$, $b = 0$

    (b) $m = -\frac{3}{4}$, $b = 2$

    (c) $m = \frac{2}{3}$, $b = -4$

(5)   (a) $y = 3x - 4$
    (b) $y = -2x - 12$
    (c) $y = x + 6$
    (d) $y = -\frac{1}{3}x$

(6)   (a) $y - 1 = 4(x - 4)$, $y = 4x - 15$
    (b) $y - 4 = -\frac{1}{4}(x - 1)$, $y = -\frac{1}{4}x + \frac{17}{4}$
    (c) $y - 9 = -\frac{1}{2}(x + 8)$, $y = -\frac{1}{2}x + 4$