ACMAT100 Spring 2025
Professor Manguba-Glover
Sections 3.4.-3.5 Homework (HW 8) Name: _____

Show all work and circle/box your simplified answers. If you do the problem incorrectly, or don't show sufficient work, you will be asked to rewrite the problem for credit. Students who turn assignments in late (or do not attempt a problem) forfeit their ability to rewrite those problems for credit.

Due at the start of next class (unless otherwise arranged with Professor MG).

(1) Find the point-slope form of the line with slope 2 through $(1, 7)$. Then, rewrite it as slope-intercept form.

(2) Find the point-slope form of the line through points $(4, -2)$ and $(1, 9)$. Then, rewrite it as slope-intercept form.

(3) Find an equation (in any form) of the line through $(2, -3)$ and $(-6, 9)$

(4) Find an equation (in any form) of the line with slope $\frac{1}{2}$ through $(-1, -5)$

(5) Line 1 goes through the points $(3, 2)$ and $(-1, -2)$. Line 2 goes through $(2, 0)$ and $(3, -1)$. Are these lines parallel, perpendicular, or niether?

(6) Determine if the two lines are parallel, perpendicular, or neither: $y = -3x + 4$ and $y = -3x - 2$

(7) Determine if the two lines are parallel, perpendicular, or neither: $3x - 4y = 1$ and $6x - 8y = 7$

(8) Determine if the two lines are parallel, perpendicular, or neither: $\frac{1}{2}x - \frac{3}{4}y = 1$ and $\frac{3}{5}x + \frac{2}{5}y = -1$

(9) Find an equation (in any form) of the line through $(-2, 1)$ and parallel to the graph of $y = -5x + 2$

(10) Find an equation (in any form) of the line through $(1, -4)$ and perpendicular to the graph of $y = \frac{x}{7} + 2$