

M123 - Intermediate Algebra
Review for Sections 3.2, 3.3, 3.5-3.7

Note: This review sheet was created to review the concepts presented in your text. Each instructor may have other problems you should review to prepare for quizzes and exams in your section of the course.

1. Complete the table of solutions & graph the linear equation. (Section 3.2)

$$y = 3x + 1$$

X	Y
0	
3	
-5	

2. Determine three solutions and graph the linear equation. (Section 3.2)

$$3x - 4y = 12$$

3. Find the x- and y-intercepts and graph. (Section 3.3)

$$4x + 5y = 20$$

4. Find the x- and y-intercepts and list as ordered pairs. (Section 3.3)

$$6y - 4x = 36$$

5. Graph the equation using a method of your choice. (Section 3.2 & 3.3)

$$-3x = 1 + 4y$$

6. Graph the equation using a method of your choice. (Section 3.2 & 3.3)

$$3y + 2 = 11$$

7. Find the slope of the line containing each given pair of points. If the slope is undefined, state this. (Section 3.5)

a) (4, 7) and (3, -4)

b) (5, -3) and (-2, -3)

8. Find the slope and y-intercept of each line. (Section 3.6)

a) $y = \frac{3}{4}x + 2$

b) $2x + 5y = 15$

9. Graph each equation using your knowledge of $y=mx+b$. (Section 3.6)

a) $x - 3y = 6$

b) $2x + 5y = 14$

10. Determine if the two lines are parallel, perpendicular, or neither. (Section 3.6)

L1: $3y = 5 - 2x$ L2: $9 - 3y = 2x$

11. Write an equation of the line that contains (5, -5) and is perpendicular to the line that contains (5, -3) and (-5, 5). (Section 3.5 & Section 3.7)

12. a) Write an equation of the vertical line that contains the point (3, -4).
b) Write an equation of the horizontal line that contains the point (3, -4).
13. Write the slope-intercept equation for the line with the given point and slope.
(Section 3.7)
- a) $m = -4$; (-2, -1) b) $m = \frac{3}{2}$; (4, 7)
14. Write the slope intercept equation of the line through (3, 5) that is parallel to the given line. (Section 3.7)
- $$y = \frac{-2}{3}x + 5$$