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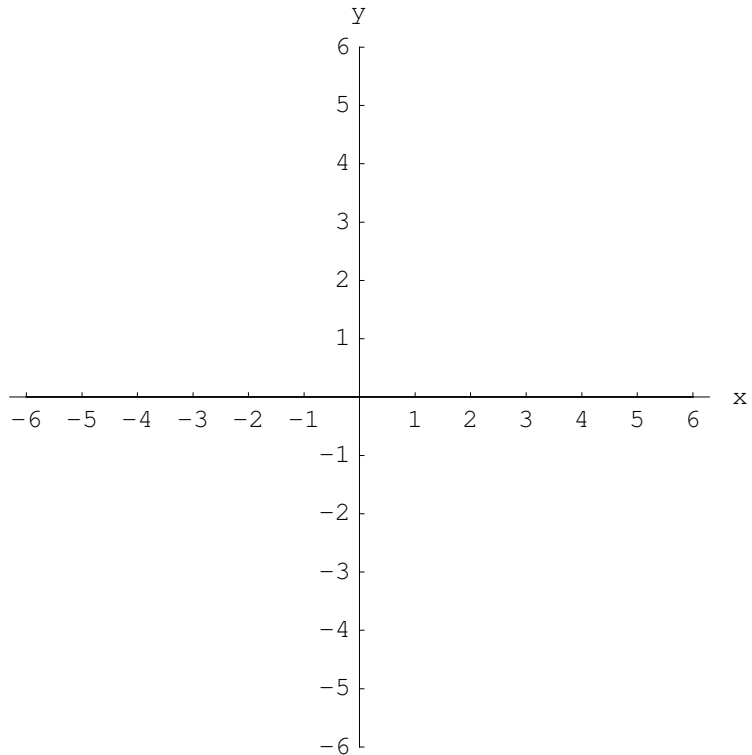
**Math 8 Trimester 2 PRACTICE Exam 1 (220 Points)**  
*Equation of Line*

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*Answers will be at math.mnrt.net at the end of today (Thursday, Feb. 23).  
Look for them on the homework page for your class.*

- **Answers must be exact. All fractions must be fully simplified, but do not answer in mixed numbers.**
- **To receive the most credit for a question, show how you arrive at your answer. Show enough work so that a good student at your grade level would understand your work.**
- **All answers count for 20 points.**

[1] Plot the line  $2x + 3y - 12 = 0$ . Show the intercepts on your graph.



[2] Write the slope and the y-intercept of the line  $y = \frac{-3}{5}x - 7$ .

[3] Write the slope and the y-intercept of the line  $3x + 7y - 14 = 0$ .

[4] Find the slope of a line through  $P(2, -5)$ ,  $Q(-6, 13)$ .

[5] Write the equation of the line that is parallel to  $3x + 5y - 7 = 0$  and has a y-intercept of  $-13$ .  
Answer in slope-intercept form.

[6] Write the equation of the line through the points  $P(2, 3)$  and  $Q(7, 5)$ .  
Answer in standard form.

[7] Write the equation of the line through  $Q(3, 7)$  that is perpendicular to the line  $x = 3$ .

[8] At what point does the equation of the line through the points  $P(2, 0)$  and  $Q(1, -3)$  cross the y-axis?

[9] Write the equation of the line through  $P(-3, 14)$  that is parallel to the line  $\ell_1 : y = \frac{-2}{7}x - 17$ .  
Answer in standard form.

[10] Write the equation of the line through  $P(2, 7)$  that is perpendicular to the line  $\ell_1 : 2x - 6y + 13 = 0$ . Answer in standard form.

[11] Find the point of intersection (if it exists) of the lines  $\ell_1 : 3x + 4y = 25$  and  $\ell_2 : x + 2y = 11$ .