

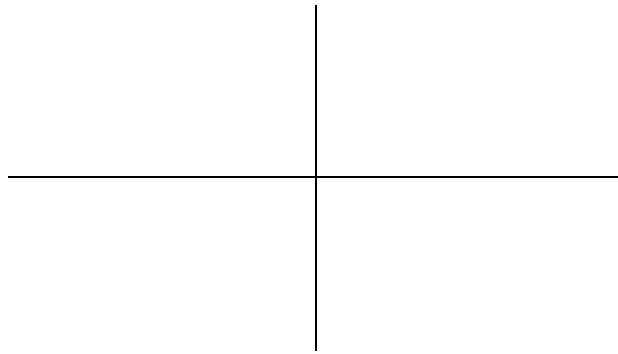
**QUIZ 1**

**Instructions:** Put your name in the blanks above. Put your final answers to each question in the designated spaces on these pages. Show your work—if there is not enough room, use another sheet.

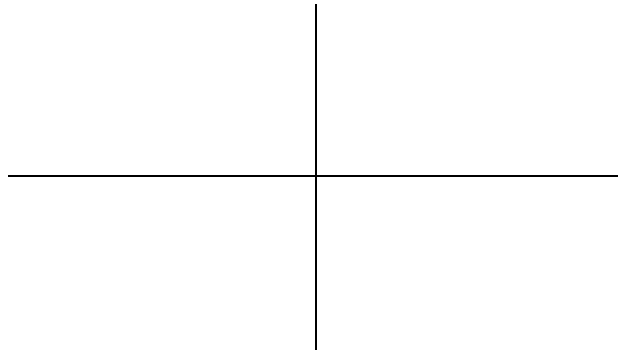
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(1) For each of the following linear equations, find the intercepts (if a given intercept does not exist, say so), and draw the corresponding graph (clearly marking the intercepts).

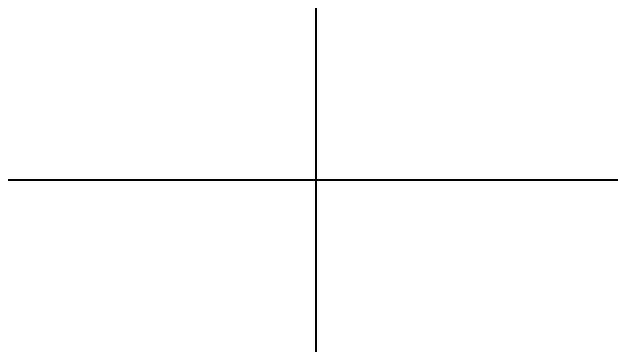
(a)  $2x - 7y = 14$                        $x$ -intercept = \_\_\_\_\_                       $y$ -intercept = \_\_\_\_\_



(b)  $2y + 3 = 0$                        $x$ -intercept = \_\_\_\_\_                       $y$ -intercept = \_\_\_\_\_



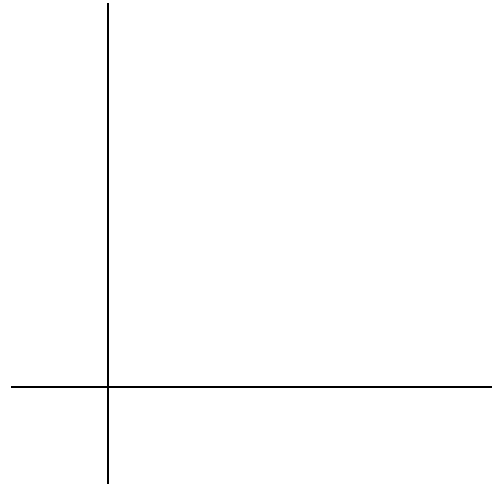
(c)  $3x - 2y = 0$                        $x$ -intercept = \_\_\_\_\_                       $y$ -intercept = \_\_\_\_\_



- (2) Use the substitution method to solve the following system of equations:

$$\begin{aligned}4x + y &= -1 \\2x - 3y &= 10\end{aligned}$$

- (3) It costs \$4 to set up a lemonade stand. Each lemonade costs \$0.5 to make, and sells for \$1. If  $x$  designates the number of lemonades sold, find the cost function,  $C(x)$ , the revenue function,  $R(x)$ , and the break-even point. Graph the cost and revenue functions on the set of axes below, and mark down the break-even point.



- (4) Solve the following system of linear inequalities (shade the corresponding region, and indicate the corner points):

$$\begin{aligned}2x + 5y &\leq 10 \\x &\geq 0 \\y &\geq 0\end{aligned}$$

