

QUIZ 4 - MATH 102

Monday, February 14

YOUR NAME: _____

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Read each problem **very carefully** before starting to solve it. Each problem is worth 5 points. It is necessary to show **all** your work. Correct answers without explanations are worth 0 points. GOOD LUCK!!

1. Find an equation for the straight line L_2 that passes through $(2, 7)$ and is perpendicular to the line L_1 , that passes through the points $(0, -3)$ and $(5, 0)$.

2. Graph the solution set of the linear inequality $3x - 5y > 15$.

3. Solve the following system of linear equations by substitution:

$$\left\{ \begin{array}{rcl} 4x - 2y & = & -12 \\ -6x + y & = & 4 \end{array} \right\}$$

4. Your friend Kate, who is a chemist, but not very good in math, wants to mix a 7% acid solution with a 23% acid solution to obtain 50 liters of 19% acid solution. Can you help her out by finding how many liters of each solution she should mix?