BEGINNING ALGEBRA  MIDTERM II

NAME: ____________________________

STUDENT ID #: ____________________

SIGNATURE: _________________________

SEAT: ROW ____  COL ___

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(1) How many quarts of 10% lemonade (10% pure lemon) must be added to 12 quarts of 30% lemonade to make 15% lemonade.
(a) Set up an equation which describes the problem, then (b) solve the equation.

(2) A certain cereal contains 220 calories per 60 grams of cereal.
   How many calories is contained in 42 grams of cereal?
   (a) Set up an equation which represents the problem. (b) Solve the equation.
(3) In a triangle, one angle is 3 times the smallest angle, and the other angle is 15 degrees more than the smallest angle. Find all angles in the triangle.
   (a) Set up an equation which represents the problem. (b) Solve the equation.

(4) Ramsey had $7500. He invested some money in muni bonds, which paid 10% interest, and the rest of the money in corporate bonds, which paid 20% interest. The total interest earned from both investments was $1370.
   (a) Set up an equation which describes the problem.
   (b) Solve the equation and find the amount invested in corporate bonds?
(5) A line passes through the points (−2, 9) and (10, 3).
Find the (a) slope, (b) equation of the line, (c) y-intercept, (d) x-intercept.

(6) Given the graph,
find (a) the slope of the line, (b) an equation of a line, (c) y-intercept, (d) x-intercept.
(7) Let $3x - 4y = 6$.
Find (a) the slope (b) y intercept (c) x intercept (d) graph the equation.

(8) Shade the solution region of $x - 2y \leq 4$. 