

**MASSACHUSETTS MATHEMATICS LEAGUE
CONTEST 6 - MARCH 2008
ROUND 4 ALG 1: ANYTHING**

ANSWERS

A) _____

B) _____

C) _____

A) Solve for x . $3 = 1 + \frac{2}{3 + \frac{1}{x}}$

B) On a true false test, Claude, who is never prepared for tests, guessed the answers to all the questions and managed to get 24 out of the first 75 questions correct. Thereafter, he answered 2 out of every 5 correctly. Overall he answered 35% of the questions correctly. How many questions were there on the test?

C) Find all ordered pairs of positive integers (x, y) such that $2x - 5y = 1$ and $10 < x + y < 20$.