

**MASSACHUSETTS MATHEMATICS LEAGUE
CONTEST 2 - NOVEMBER 2015
ROUND 2 ALGEBRA 1: ANYTHING**

ANSWERS

A) _____

B) _____

C) _____

- A) There are 36 marbles in a bag. 16 are red, 7 are white and the remaining marbles are blue. The blue marbles are removed, each one being replaced by either a red or a white marble. How many blue marbles must be replaced by red marbles so that the ratio of red to white marbles is 2 : 1?
- B) For integers x and y , $3x + 8y = 101$, $x > 0$ and, $y > 0$.
Compute all possible sums of $x + y$.
- C) Sara, running in a 5-mile race, ran the first 2 miles in 15 minutes. Her overall average speed for the entire race was 25% more than her average speed for the first 2 miles. Compute her average speed for the last 3 miles (in miles per hour).