

MASSACHUSETTS MATHEMATICS LEAGUE
CONTEST 1 - OCTOBER 2012
ROUND 3 ALG 1: LINEAR EQUATIONS

ANSWERS

A) _____

B) _____

C) (_____ , _____ , _____)

- A) Solve for x in terms of a , b , c , and d . $a + b - c \div d \cdot x = 1$
Express your answer as a single simplified fraction using a minimum number of minus signs.

- B) Find all possible positive values of n for which $\frac{1+2+3+\dots+n}{n} = 2012$.

- C) A collection of exclusively dimes and quarters is worth \$49.75 .
There is at least one of each type of coin.
The total number of coins in the collection can take on n different values.
The minimum possible number of coins is m and the maximum possible number of coins is M .
Determine the ordered triple, (n, m, M) .