MASSACHUSETTS MATHEMATICS LEAGUE
CONTEST 2 - NOVEMBER 2013
ROUND 2 ALGEBRA 1: ANYTHING

ANSWERS

A) _____ ounces

B) $ _____ . _____

C) _____

A) A 16 ounce solution of water and acid is 63% acid. Determine how much water (in ounces) must be added to the mixture to obtain a solution that is 36% acid.

B) Dick's stamps are valued at 46¢ each, while Joe's stamps are valued at 23¢ each. If Dick has three times as many stamps as Joe and the total value of all the stamps together is $12.88, how much more are Dick's stamps worth than Joe's? Express your answer in dollars and cents.

C) Given the function of x denoted $f(x) = 5x - 3$

Compute the value of h for which $\dfrac{f(x+h) - f(x-h)}{h} = 3h - 8$.