

MASSACHUSETTS MATHEMATICS LEAGUE
CONTEST 1 - OCTOBER 2014
ROUND 3 ALG 1: LINEAR EQUATIONS

ANSWERS

A) _____

B) _____

C) _____

A) Three pounds of beans cost \$4.80.

Two pounds of corn cost \$1.80. How many pounds of beans must be added to 30 pounds of corn to form a mixture that sells for \$1.10 per pound?

B) Consider the linear equation $y = 3x + 2$.

As x increases from k to $k + 3$, the value of y increases to $2y + 1$.

Compute this unique value of k .

C) At a scenic overlook, some artists were painting at their easels. All easels have 3 legs. All chairs have 4 legs. These artists either paint while standing, or paint while sitting. Suppose X artists stood at their easels, and Y artists sat in a chair, while using their easels. The total number of easel legs and chair legs was 92. If the total number of artists was less than 25, determine all possible ordered pairs (X, Y) .