

**MASSACHUSETTS MATHEMATICS LEAGUE
CONTEST 5 - FEBRUARY 2015
ROUND 4 ALG 1: WORD PROBLEMS**

ANSWERS

A) \$ _____

B) _____ minutes

C) _____ cups

A) The Kohl's department store is famous for giving discounts of merchandise which has already been discounted. Compute the original price of an article, if the customer pays \$63 after Kohl's has discounted the article 40%, and then discounted an additional 30%.

B) One day on a cross-country road trip with my family, we started at 10:30AM. I drove at an average of 70 mph for 2 hours, stopped k minutes for lunch, drove for another $3\frac{1}{4}$ hours at an average speed of 60mph and then stopped for the day. My average speed for the entire day was 50 mph. Compute k .

C) Heavy cream is 41% butterfat, while whole milk contains only 5% butterfat. In order to make a delicious pint of ice cream, a recipe calls for 3 cups of a mixture which is 19% butterfat. Compute the number of cups of heavy cream which must be used to produce the correct butterfat percentage.