MASSACHUSETTS MATHEMATICS LEAGUE
CONTEST 3 - DECEMBER 2014
ROUND 4 ALG 2: LOG & EXPONENTIAL FUNCTIONS

ANSWERS

A) _____

B) _____

C) _____

A) Solve for $x > 0$. $\log_2 \sqrt{x^2 + x^2 + x^2 + x^2} = 5$

B) Compute <u>all</u> possible real values of x for which $125^x + 4(25)^x - 13(5)^x - 52 = 0$.
Express your answer(s) in terms of $\log_5$.

C) Solve for x over the reals: $\dfrac{x}{4} = 2^{\log_x 8}$