

MASSACHUSETTS MATHEMATICS LEAGUE
CONTEST 4 - JANUARY 2009
ROUND 2 ALG 1: FACTORING AND/OR EQUATIONS INVOLVING FACTORING

ANSWERS

A) _____

B) _____

C) _____

A) Clearly $x = 3$ is a solution of the equation $(2x - 1)(x + 2) = 25$. Find the non-integer solution.

B) Determine all values of x that satisfy $12x^5 - 36x^3 = 46x^4$

C) Factor the following expression completely over the integers.

$$72x^3 - 4x^2 + 9 - 32x^5$$