

MASSACHUSETTS MATHEMATICS LEAGUE
CONTEST 4 - JANUARY 2010
ROUND 2 ALG 1: FACTORING AND/OR EQUATIONS INVOLVING FACTORING

ANSWERS

A) _____

B) _____

C) _____

***** NO CALCULATORS IN THIS ROUND *****

A) Simplify completely.

$$\frac{6x^2 - 5x - 6}{10 + 15x}$$

B) Compute the value of the integer constant A for which a solution of the following equation is 2.

$$\frac{12x^2 + 12x - 45}{9 - 4x^2} = \frac{4x - A}{7}$$

C) Solve for x .

$$\frac{4}{5 - \frac{3+x}{3}} = \frac{16}{4 + \frac{8}{3 - \frac{6}{x}}}$$