

MASSACHUSETTS MATHEMATICS LEAGUE
JANUARY 2006
ROUND 2 ALGEBRA ONE: FACTORING & EQUATIONS
ANSWERS

A) _____

B) _____

C) _____ cm

All Factoring Is Over The Polynomials With Integer Coefficients

- A) Find the largest integer g for which $2x^2 + gx - 15$ will be factorable.
- B) Find the greatest common factor of $12x^2 - 42x + 18$ and $8x^2 + 20x - 12$.
- C) A rectangular hole is cut all the way through a cube leaving side borders of 5 cm each and front and back borders of 12 cm as shown. If creating the hole removes exactly half of the volume of the cube, find all possible lengths for the side of the original cube.

