# MASSACHUSETTS MATHEMATICS LEAGUE
## CONTEST 2 - NOVEMBER 2014 ANSWERS

**Round 1 Algebra 2: Complex Numbers (No Trig)**

A) 14 B) 50 C) –64

**Round 2 Algebra 1: Anything**

A) 11 B) 7 C) (15, 48,–27)

**Round 3 Plane Geometry: Area of Rectilinear Figures**

A) 88 B) $4 + 2\sqrt{2}$ C) $\dfrac{1728}{625}$

**Round 4 Algebra: Factoring and its Applications**

A) $6x^2z^3$ B) $-\dfrac{3}{8}, -\dfrac{1}{3}$ C) $x = A + 8, \ A - 3$

**Round 5 Trig: Functions of Special Angles**

A) 30, 60, 90, 120, 150 B) –2 C) (39, 12)
(answers with degree symbols are acceptable)

**Round 6 Plane Geometry: Angles, Triangles and Parallels**

A) 71 B) 6 only C) 13
[8 is extraneous.]

**Team Round**

A) 22 D) 11 or 12

B) SAT E) 0, ±1

C) 1344, 1584, 1680, 1704 F) 5
(in any order)