

**MASSACHUSETTS MATHEMATICS LEAGUE
CONTEST 2 - NOVEMBER 2016 ANSWERS**

Round 1 Algebra 2: Complex Numbers (No Trig)

- A) 3 B) 13 C) (2, 11)

Round 2 Algebra 1: Anything

- A) (23, 9) B) 13, 19 (in any order) C) 3

Round 3 Plane Geometry: Area of Rectilinear Figures

- A) 1 : 8 B) 10.5 (or $\frac{21}{2}$) C) $\frac{55\sqrt{3}}{14}$

Round 4 Algebra: Factoring and its Applications

- A) $-\frac{2}{3}, 1$ B) (4, 5) C) 8, 14

Round 5 Trig: Functions of Special Angles

- A) 870 B) 2 C) $\sqrt{3}-2$

Round 6 Plane Geometry: Angles, Triangles and Parallels

- A) 288 B) (181,359) C) 40

Team Round

- A) 65535 D) (3, -4, 2, 12, 15, -2)
- B) (11,3), $S = \{8,10,11\}$ E) $\frac{1}{16}$
- C) (3, 4, 8) F) 160