

**MASSACHUSETTS MATHEMATICS LEAGUE
CONTEST 1 - OCTOBER 2015 ANSWERS**

Round 1 Geometry Volumes and Surfaces

- A) 5 B) $7\pi : 45$ C) 135π

Round 2 Pythagorean Relations

- A) 442 B) 13 C) $3\sqrt{6}, 5\sqrt{6}$
(Both answers required.)

Round 3 Linear Equations

- A) 4 B) 60 C) (1250, 42)

Round 4 Fraction & Mixed numbers

- A) (8, 1), (-18, 3) B) -10 C) (56, 1)

Round 5 Absolute value & Inequalities

- A) 11 B) -1, -2 C) $-6 < x \leq -\frac{8}{5}$ or $x > 5$

Round 6 Evaluations

- A) 14 B) 10 C) 621

Team Round

- A) $\frac{84}{5}$ or 16.8 D) (6, 866)
B) 36 E) 62
C) -20 F) 17