

**MASSACHUSETTS MATHEMATICS LEAGUE
CONTEST 1 - OCTOBER 2016 ANSWERS**

Round 1 Geometry Volumes and Surfaces

A) 150

B) $y = x \pm 1$
(2 answers required)

C) (25920, 3)

Round 2 Pythagorean Relations

A) 25

B) 176

C) $\sqrt{3R}$

Round 3 Linear Equations

A) 20

B) 75 mph

C) (18,1)

Round 4 Fraction & Mixed numbers

A) 870 mph

B) 9

C) $\frac{4}{3}$

Round 5 Absolute value & Inequalities

A) 10

B) $-4 \leq x \leq \frac{3}{2}$

C) $x < -2$ or $-1 < x < 0$ or $1 < x < 2$

Round 6 Evaluations

A) 42

B) 33

C) 8

Team Round

A) 62

D) 53

B) $\frac{41}{11}$

E) $-1 \leq x \leq 10$

C) (3,6,9,12,15)

F) (10, 15)