

**MASSACHUSETTS MATHEMATICS LEAGUE  
CONTEST 6 – MARCH 2014 ANSWERS**

**Round 1 Alg 2: Simultaneous Equations and Determinants**

- A)  $-\frac{7}{2}$                       B) (4, 8)                      C) (6, 3, 2), (-6, -3, -2)

**Round 2 Alg 1: Exponents and Radicals**

- A) 9                      B)  $-1, \frac{3}{2}, \frac{5}{2}$                       C) -1, -5

**Round 3 Trigonometry: Anything**

- A)  $\left(-3, \frac{1}{4}, 4\right)$  or  $\left(3, -\frac{1}{4}, 4\right)$                       B) 82                      C) (-1, 99)

**Round 4 Alg 1: Anything**

- A) 11                      B) 6                      C) 255

**Round 5 Plane Geometry: Anything**

- A)  $\angle V_{12}V_1V_2$  or  $\angle V_2V_1V_{12}$                       B) 102                      C)  $40\pi$

**Round 6 Alg 2: Probability and the Binomial Theorem**

- A) 126                      B)  $-8064k^5$                       C) 528

**Team Round**

- A)  $-\frac{7}{24}$                       D) 36
- B) 1007                      E) (156, 1170)
- C) 41                      F) (53, 24, 6, 2)