

**MASSACHUSETTS MATHEMATICS LEAGUE  
CONTEST 6 – MARCH 2008 ANSWERS**

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

A)  $(-2, -4)$

B)  $2, -11/2$

C)  $(\$8, \$5, \$6)$

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

A)  $-3/2$

B)  $\pm 3$   
(both answers required)

C)  $(27, 14)$

**Round 3 Alg2: Polynomial Functions**

A)  $4$

B)  $-3$

C)  $3x^3 + 5x^2 - 4x - 4 = 0$   
 $(x - 1)(x + 2)(3x + 2) = 0$   
or equivalent

**Round 4 Alg 1: Anything**

A)  $-\frac{1}{2}$

B)  $120$

C)  $(8, 3)$  and  $(13, 5)$

**Round 5 Plane Geometry: Anything**

A)  $20$

B)  $36$

C)  $16\sqrt{2}$

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

A)  $\frac{5}{14}$

B)  $11$

C)  $\frac{101}{240}$

**Team Round**

A)  $7$

D)  $17$

B)  $1025$

E)  $(9.6, 10.8)$

C)  $23$

F)  $89$