MASSACHUSETTS MATHEMATICS LEAGUE
JANUARY 2006 ANSWERS

Round 1:   A) 6   B) (1/5, 7/5) or (0.2, 1.4)   C) (3.5, 0)

Round 2   A) 29   B) $4x - 2$ or $2(2x - 1)$ C) 60 cm

Round 3   A) 3π B) 120, 240   C) $36.5\,\pi$ or $73\pi/2$

Round 4   A) 3, –1   B) –3, -½, 1, 1.5   C) $135

Round 5   A) 600   B) 899/30   C $3\sqrt{13}$

Round 6   A) 3   B) 3/4   C) 41/14 or $2\frac{13}{14}$

Team Round   A) –4.8, 16.8 B) $(18b^2 + 15b + 4)(18b^2 + 9b + 2)$ C) (7.5, 82.5) and (37.5, 52.5)

D) 16 or 55   E) 7 : 9   F) $52.00