

**MASSACHUSETTS MATHEMATICS LEAGUE
CONTEST 1 – OCTOBER 2012
ROUND 5 INEQUALITIES & ABSOLUTE VALUE**

ANSWERS

A) _____

B) _____

C) _____

A) If $y = 10 - 3x$ and $1 \leq 2x - 3 \leq 7$, compute the minimum possible value of y .

B) Solve for x .

$$\frac{2}{x+6} \geq \frac{5}{x-3}$$

C) Solve for x over the reals: $|x^2 - 3x - 1| \leq 3$ and $|2x| \geq 5$