

MASSACHUSETTS MATHEMATICS LEAGUE
JANUARY 2004
ROUND 3: TRIG EQUATIONS
NON-CALCULATOR

ANSWERS

A) _____

B) _____

C) _____

A) Solve for $0^\circ \leq \theta < 360^\circ$, $\sin \theta + \csc \theta = 2.5$

B) Solve for $0 \leq x < 2\pi$, $\frac{2 \sin^2 x}{1 - \cos x} = 1$

C) Solve for $0 \leq x < 2\pi$, $\tan 2x = -3 \cot x$