

MASSACHUSETTS MATHEMATICS LEAGUE
DECEMBER 2004
ROUND 1 TRIG: RT ANGLE, LAWS SINES & COSINES

ANSWERS

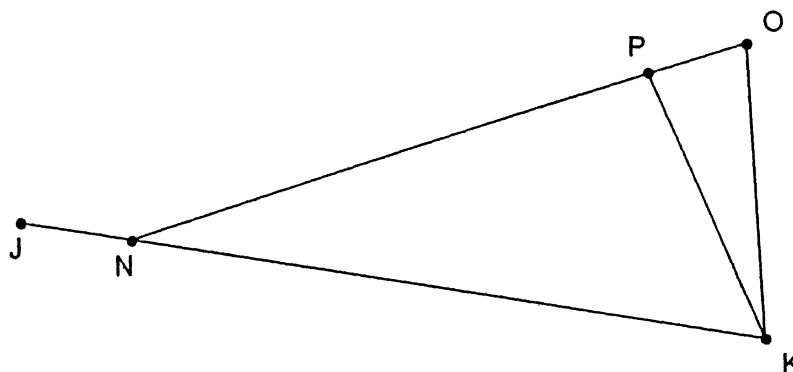
A) _____

B) _____

C) _____

A) If $\sec(x)=2.2$ and $\tan(x)<\cos(x)-2$, find the exact value of $\csc(x)$ in simplified radical form

B) If $\triangle NOK$ is isosceles with $NO = NK = 18$, $OP = 2$, and $\cos(\angle JNO) = -0.75$ find PK in simplified radical form.



C) Given $DB = 91$, $AC = 7$, $EC = 8$, $\angle D = 30^\circ$, and $\overline{AC} \perp \overline{AB}$ find the exact length of \overline{AB} .

