

MASSACHUSETTS MATHEMATICS LEAGUE
NOVEMBER 2005
ROUND 3 GEOMETRY: AREA

ANSWERS

A) _____

B) _____

C) _____

A) Square ABCD has area 400. Its diagonals intersect at E. Find the exact perimeter of triangle ABE.

B) Rectangle SROH has $SR = 40$ and $SH = 30$. Point E is on \overline{RH} so that $\overline{SE} \perp \overline{RH}$. Find the area of concave pentagon SHORE.

C) The area of a kite is 168. The shorter diagonal is the axis of symmetry; the other diagonal has length 24. If the kite has integral sides, find its perimeter.