MASSACHUSETTS MATHEMATICS LEAGUE
OCTOBER 2005
ROUND 2 PYTHAGOREAN RELATIONS

ANSWERS

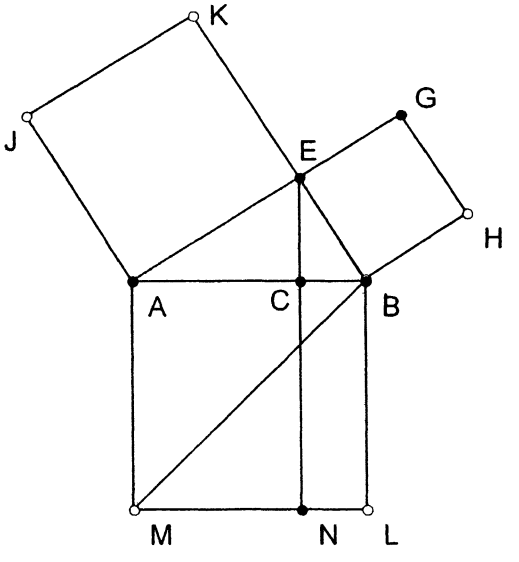
A)_____ft.

B)_____

C)_____

A) **The shortstop fields a batted ball at a point 1/3 the distance from second base to third base. To the nearest 0.1 ft. how far must she throw the ball to get it to first base? Assume the infield is a square 90 ft. on a side.**

B) **Squares are constructed on each side of right ΔABE as shown. $\overline{EN} \perp \overline{AB}$ Find the area of JAEK if NL=4 and AC=12**



C) **Two kites each have sides of 15 and 41 and a smaller diagonal of 18. However, one kite is concave and the other convex. Find the difference in their areas.**