MASSACHUSETTS MATHEMATICS LEAGUE
CONTEST 1 - OCTOBER 2009
ROUND 2 PYTHAGOREAN RELATIONS IN RECTILINEAR FIGURES

******* NO CALCULATORS IN THIS ROUND *******

ANSWERS

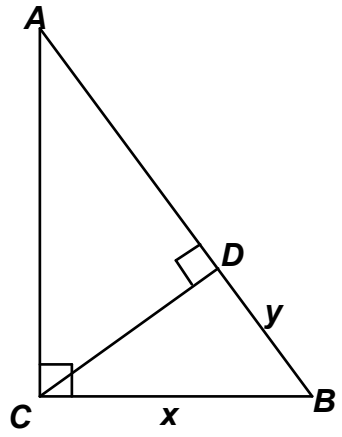
A) _____ : _____

B) (_____ , _____)

C) _____

A) In square $ABCD$, $AB = 4$, E and F are midpoints of $\overline{BC}$ and $\overline{CD}$ respectively. Compute the ratio of the area of ΔAEF to the area of $ABCD$.

B) Given: $AD = 8$, $CD = 6$
Compute the ordered pair (x, y).



C) A right triangle has a hypotenuse of length 65. If the length of the long leg is increased by 4 and the length of the short leg is decreased by 8, the length of the hypotenuse is unchanged. What is the perimeter of the original right triangle?