

**MASSACHUSETTS MATHEMATICS LEAGUE**  
**CONTEST 4 – JANUARY 2008**  
**ROUND 5 GEOMETRY: SIMILARITY OF POLYGONS**

**ANSWERS**

A) ( \_\_\_\_\_ , \_\_\_\_\_ )

B) \_\_\_\_\_

C) \_\_\_\_\_

A)  $\triangle ABC$  is a right triangle with legs  $AB = 3$  and  $BC = 4$ .  $\triangle DEF \sim \triangle ABC$  and  $DF = 6$ .  
Determine the ordered pair  $(DE, EF)$ .

B) A line parallel to the short sides of a 12 x 25 rectangle subdivides the rectangle into two similar noncongruent rectangles. Determine the area of the larger of these two rectangles.

C) If  $PQRS$  is a 3 x 4 rectangle as illustrated,  
 $\overline{AB} \perp \overline{BC}$  and  $RC = 3$ ,  
compute the perimeter of  $\triangle ABC$ .

