MASSACHUSETTS MATHEMATICS LEAGUE
CONTEST 6 – MARCH 2007
ROUND 5 PLANE GEOMETRY: ANYTHING

ANSWERS

A) _____

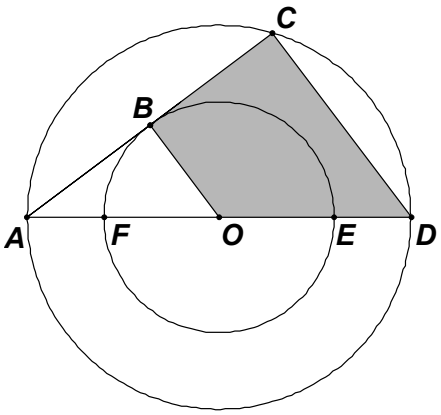
B) _____

C) _____

A) *ABCD* is a rectangle with sides of lengths 12 and 35.
All possible line segments connecting pairs of vertices are drawn.
What is the total length of all these line segments?

B) Given: concentric circles with center at point O
chord $\overline{AC}$ is tangent to the inner circle at point B
$AB = 8$, $AF = 4$

Determine the area of quadrilateral *BCDO*.



C) Given: Rectangle *ABCD*, $AB = 160$, $BC = 120$, $BE = 20$, $\overline{EF} \perp \overline{AC}$, $\overline{BG} \parallel \overline{EF}$
Find the area of *BEFG*.