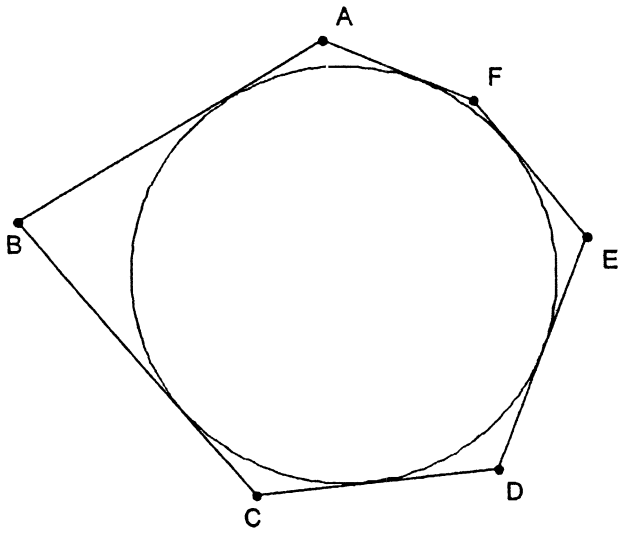
MASSACHUSETTS MATHEMATICS LEAGUE
DECEMBER 2004
ROUND 6 GEOMETRY: POLYGONS
ANSWERS

A)_____

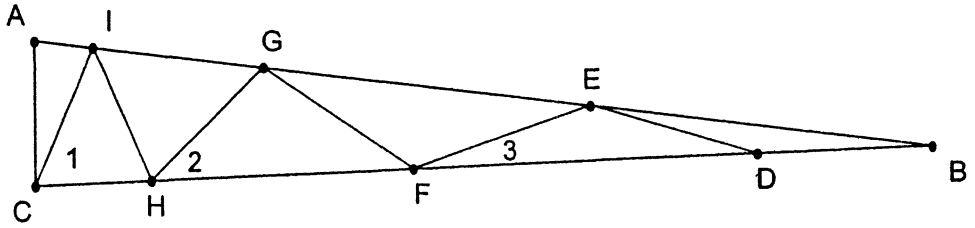
B)_____

C)_____

A) Given the circumscribed hexagon ABCDEF with AF=2, EF=5, ED=8, and BC=10 find AB + CD



B) ΔABC is isosceles with AC=CI=IH=HG=GF=FE=ED=BD. Find $\angle 1 + \angle 2 + \angle 3$



C) The number of diagonals in a regular polygon is exactly 20.9 times the measure of an interior angle divided by the measure of an exterior angle of the polygon. How many sides does the polygon have?