MASSACHUSETTS MATHEMATICS LEAGUE
CONTEST 6 - MARCH 2011
ROUND 5 PLANE GEOMETRY: ANYTHING

ANSWERS

A) _____ °

B) _____

C) _____ : _____

******* NO CALCULATORS ON THIS ROUND *******

A) An isosceles triangle has interior angles which measure $(3x)°$ and $(6x)°$. Compute the degree-measure of the smallest possible interior angle.

B) ΔPQR is similar to a triangle with sides 3, 4 and 5. If the shortest distance in ΔPQR from the vertex of the right angle to the hypotenuse is h units, compute the perimeter of ΔPQR (in terms of h).

C) Given: $m\angle P = 2m\angle Q$, $AB = FE$

Express $\dfrac{m\angle 1 + m\angle 2}{m\angle P}$ as a simplified ratio of integers.