MASSACHUSETTS MATHEMATICS LEAGUE CONTEST 2 - NOVEMBER 2008 ROUND 6 PLANE GEOMETRY: ANGLES, TRIANGLES AND PARALLELS

ANSWERS

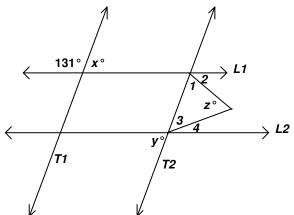
A) _____°

B) _____

C) _____

A) One exterior angle of a regular polygon measures 4.5°. What is the sum of the interior angles of this polygon?

B) Given: $L_1 \parallel L_2$ and $T_1 \parallel T_2$, $m \angle 1 = m \angle 2$ and $m \angle 3 = m \angle 4$, and an obtuse angle of 131° as indicated in the diagram below. Compute y + z.



C) Given: \overrightarrow{AD} bisects $\angle BAC$, BD = DF and $\overline{EF} \parallel \overline{AC}$ If AB = 7, AC = 13 and BC = 11, compute FE.

