



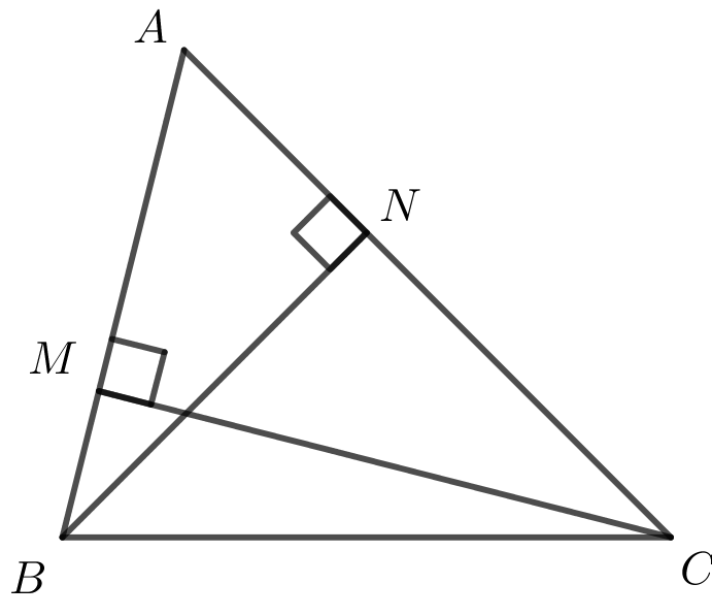
Problem of the Week

Problem C

Altitude Change

In acute $\triangle ABC$, two altitudes have been drawn in. Point M lies on AB so that CM is an altitude of $\triangle ABC$, and point N lies on AC so that BN is an altitude of $\triangle ABC$.

Suppose $CM = 32$ cm, $AB = 36$ cm, and $AC = 40$ cm. Determine the length of altitude BN .



NOTE: An altitude of a triangle is the line segment drawn from a vertex of the triangle perpendicular to the opposite side.