Problem of the Week Problem E Medians

In $\triangle ABC$, $\angle ABC = 90^{\circ}$. A median is drawn from A to side BC, meeting BC at M such that AM = 5. A second median is drawn from C to side AB, meeting AB at N such that $CN = 2\sqrt{10}$.

Determine the length of the longest side of $\triangle ABC$.



NOTE: In a triangle, a *median* is a line segment drawn from a vertex of the triangle to the midpoint of the opposite side.