

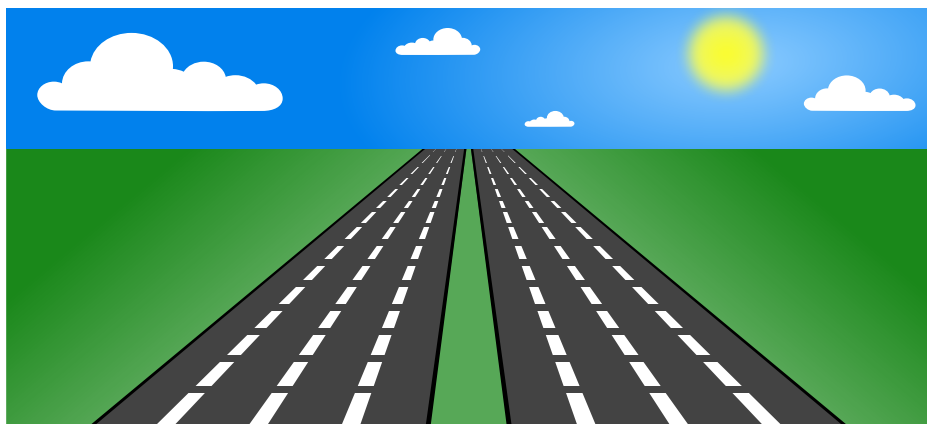


Problem of the Week

Problem E

Not That Kind of Median

On highways, medians are used to separate opposing lanes of traffic on divided highways. Our problem is not interested in that kind of median.



In triangles, a *median* is a line segment drawn from the vertex of a triangle to the midpoint of the opposite side, separating the triangle into two triangles of equal area.

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

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

