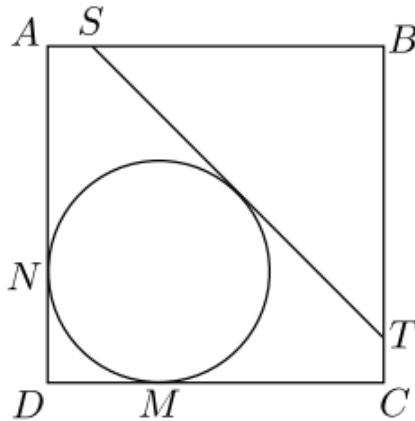


Ninth Problem of the Week, due Thursday 11/09

In the figure, the circle is tangent to the square $ABCD$ at the points M and N . The points S and T on the side of the square are such that $AS = CT$ and ST is tangent to the circle. If the diameter of the circle is 2 and also the distance from M to C . How large is ST ?



- (a) $\sqrt{8}$ (b) $4\sqrt{2} - 2$ (c) $2\sqrt{3}$ (d) 3 (e) $\sqrt{6} + 1$