

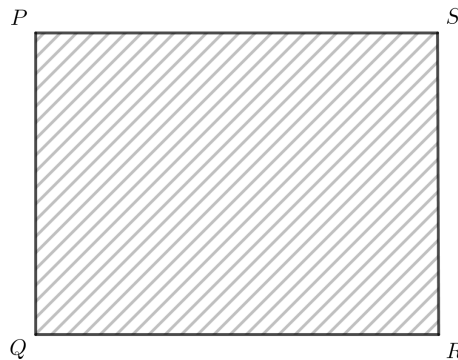


Problem of the Week

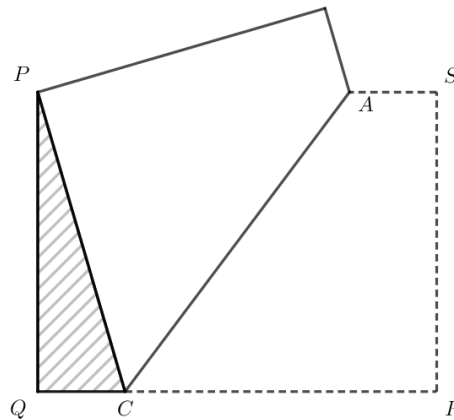
Problem E

Fold Once

A rectangular piece of paper, $PQRS$, has $PQ = 30$ cm and $PS = 40$ cm. The paper has grey lines on one side and is plain white on the other.



The paper is folded so that the two diagonally opposite corners P and R coincide. This creates a crease along line segment AC , with A on PS and C on QR .



Determine the length of AC .

