

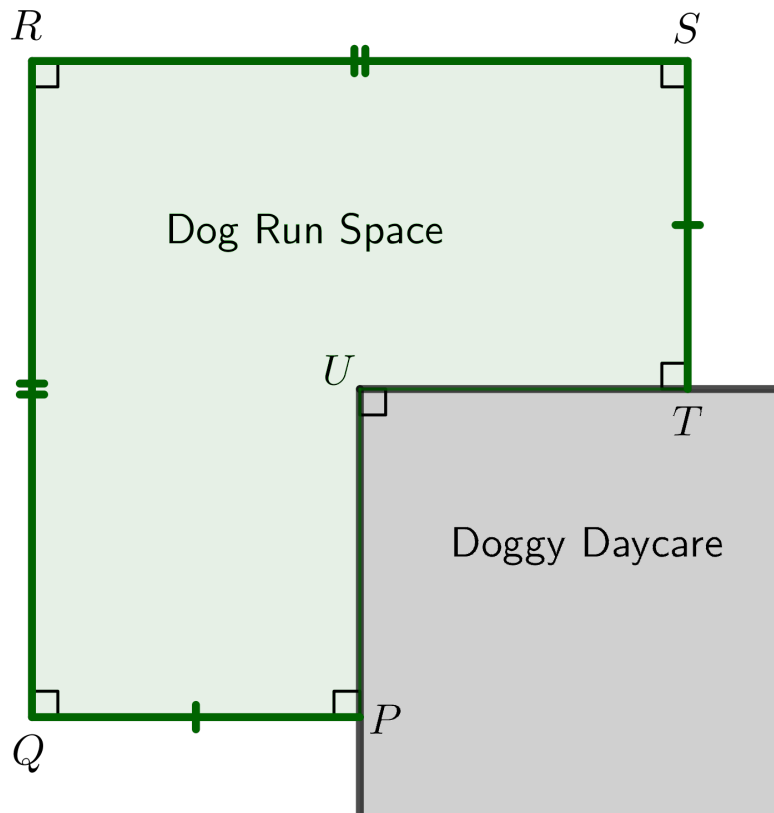


Problem of the Week

Problem E

Run Dog Run

At POTW Doggy Care, there is a need for a new outdoor dog run space. The layout of the dog run space is represented by $PQRSTU$ in the diagram below.



The lengths of the two longer sides, QR and RS , are to be the same, and the lengths of the two shorter sides, PQ and ST , are to be the same. There will be right angles at each corner.

The dog run space is to be built using a fence along PQ , QR , RS , and ST , and using the walls of the daycare along PU and TU . The total fencing to be used is 30 m. Determine the dimensions of the dog run space that will give the maximum area for the dog run.

