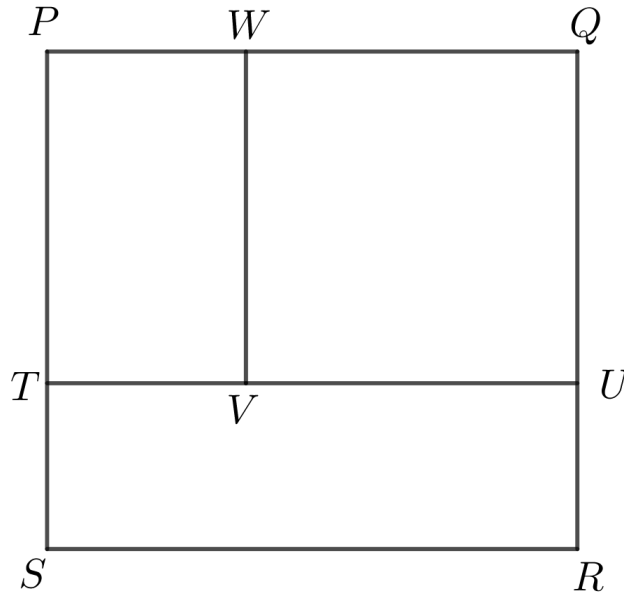# Problem of the Week
## Problem D
## Square Parts

Square $PQRS$ has $W$ on $PQ$, $U$ on $QR$, $T$ on $PS$, and $V$ on $TU$ such that $QUVW$ is a square, and $PWVT$ and $RSTU$ are rectangles.



The side length of square $PQRS$ is 9 cm, and

$$\text{area of } QUVW - \text{ area of } RSTU = \text{ area of } RSTU - \text{ area of } PWVT$$

If square $QUVW$ has side length equal to $x$ cm, determine the value of $x$ and the areas of rectangles $PWVT$ and $RSTU$.