

Name _____

Date _____

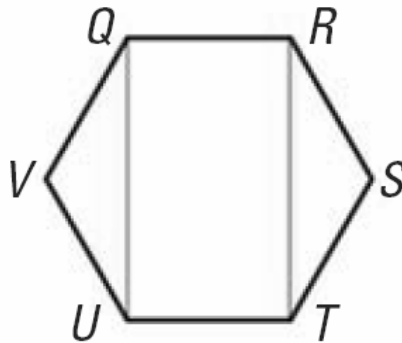
Open-ended Task: Geometry Chapter 8

Directions:

To receive full credit you must do the following:

1. Show OR describe each step of your work, even if you did it in your head (“mental math”) or used a calculator,
AND
2. Write an explanation stating the mathematical reason(s) why you chose each of your steps.

Question: Polygon QRSTUV shown below is a regular hexagon, and QU and RT are diagonals. Follow the steps below to classify quadrilateral QRTU. Explain your reasoning in each step.



A. Show that $\triangle QVU$ and $\triangle RST$ are congruent isosceles triangles.

B. Show that segments QR and UT are congruent. Show that segments QU and RT are congruent

C. Show that $\angle UQR \cong \angle QRT \cong \angle RTU \cong \angle TUQ$. Find the measure of each of these angles.

D. Classify quadrilateral QRTU