

Name _____

Date _____

Proof of Parallelograms - Guided Lesson Explanation

Explanation#1

\square PQRS (If a quadrilateral is a \square , then opposite \angle s are = in measure.)

$$m\angle P = m\angle R$$

$$\angle P = 70^\circ \quad \text{(Given)}$$

$$m\angle R = 70^\circ$$

Explanation#2

Since STUV is \square $\angle U$ and $\angle T$ are supplementary

$$m\angle U + m\angle T = 180^\circ$$

$$m\angle T = 138^\circ$$

$$m\angle U = 42^\circ$$

$$42^\circ + m\angle T = 180^\circ$$

$$m\angle T = 180^\circ - 42^\circ$$

$$m\angle T = 138^\circ$$



Name _____

Date _____

Explanation#3

A parallelogram is a quadrilateral with both pairs of opposite sides parallel.

If 2 \parallel lines are cut by a transversal, then corresponding \angle s are = in measure.

Line GK \parallel line HJ

If a quadrilateral is a parallelogram,

- a. the 2 pairs of opposite sides are congruent.
- b. the 2 pairs of opposite angles are congruent.
- c. the consecutive angles are supplementary.

If 2 parallel lines are cut by a transversal, then corresponding angles are equal in measure.

\square GHJK.

