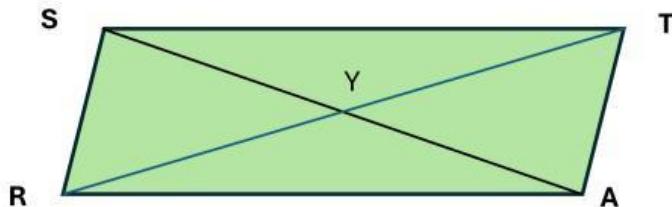




## GUIDE CARD 2

Study the figure and examples about parallelogram.

Refer to parallelogram STAR below.



1. Name two pairs of opposite side that are congruent and parallel.

Answer:  $SR \cong TA$  and  $ST \cong RA$

2. Name two pairs of opposite angles that are congruent.

Answer:  $\angle S \cong \angle A$  and  $\angle R \cong \angle T$

3. Name four pairs of consecutive and supplementary angles.

Answer:  $\angle S$  and  $\angle T$ ;  $\angle T$  and  $\angle A$ ;  $\angle A$  and  $\angle R$ ;  $\angle R$  and  $\angle S$

4. If angle S equals 110 degrees, then what is the measure of angle A? Why?

Answer: Angle A measures 110 degrees because in a parallelogram, any two opposite angles are congruent.

5. If angle S equals 110 degrees, then what is the measure of angle R?

Answer and solution:

$\angle S + \angle R = 180^\circ$  because consecutive angles of parallelograms are supplementary.

$\angle R = 180^\circ - \angle S$  by addition property

$\angle R = 180^\circ - 110^\circ$  by substitution

$\angle R = 70^\circ$

6. If  $\overline{SY} = 5.5 \text{ cm}$ , then what is  $\overline{AY}$ ? Explain.

Answer:  $\overline{AY} = \overline{SY}$ , hence  $\overline{AY} = 5.5 \text{ cm}$  because in a parallelogram, the diagonals bisect each other.