

State the two properties related to sides of a parallelogram We know ABCD is a parallelogram

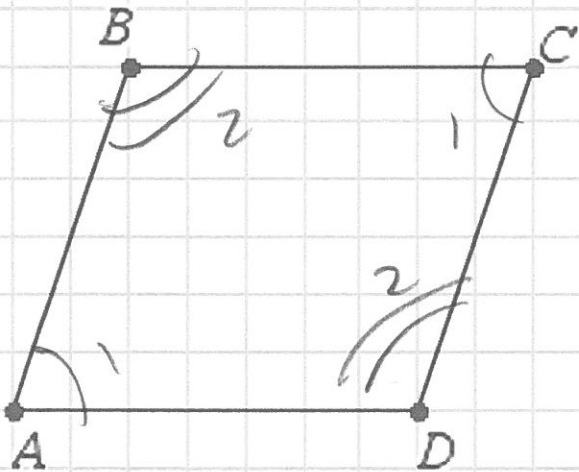
Verbal Opp. sides parallel

Use symbolic notation  $\overline{BC} \parallel \overline{AD}, \overline{AB} \parallel \overline{CD}$

Verbal Opp sides congruent

Use symbolic notation  $\overline{BC} \cong \overline{AD}, \overline{AB} \cong \overline{CD}$

Mark the figure appropriately!



State the two properties related to angles of a parallelogram We know ABCD is a parallelogram

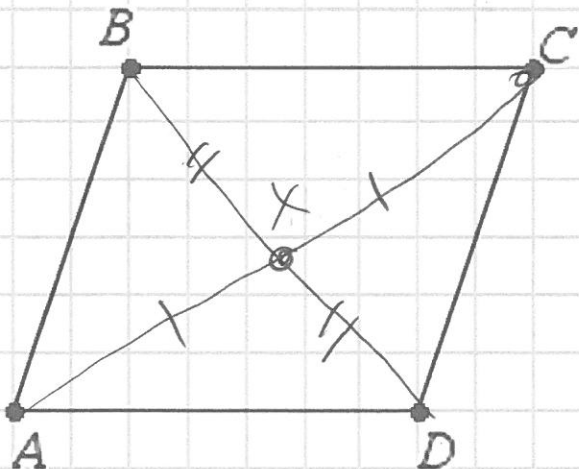
Verbal Opp  $\angle$  congruent

Use symbolic notation  $\angle B \cong \angle D, \angle C \cong \angle A$

Verbal  $\angle A$  are supplementary

Use symbolic notation  $\angle 1 + \angle 2 = 180$

Mark the figure appropriately!



State the ONE property related to Diagonals of a parallelogram We know ABCD is a parallelogram

Verbal Diagonals bisect

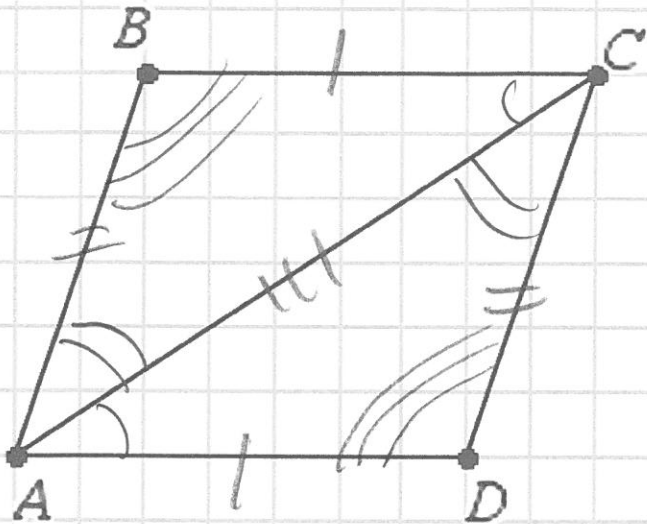
Use symbolic notation X is midpoint of  $\overline{BD}$  &  $\overline{AC}$

Mark the figure appropriately!

Because of this property we can say that point X is special WHY?

midpoint

segments are bisected



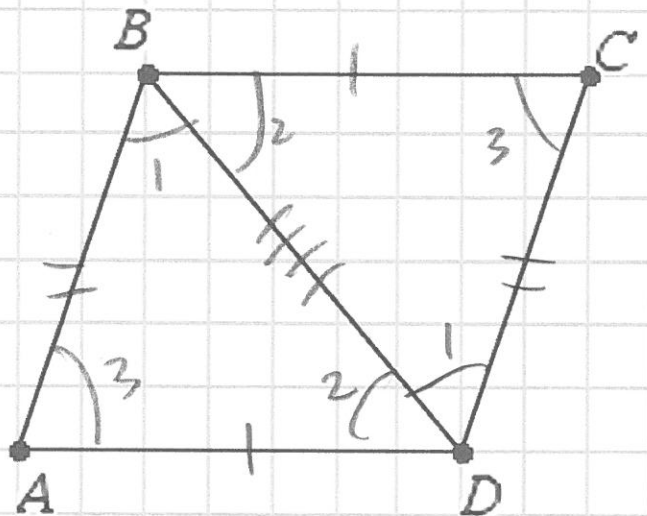
State the congruent angles created by the diagonal

$$\begin{aligned} \angle B &\cong \angle D \text{ (opp } \angle\text{s)} \\ \angle BCA &\cong \angle CAD \text{ (alt int } \angle\text{s)} \\ \angle BAC &\cong \angle ACD \text{ (alt int } \angle\text{s)} \end{aligned}$$

State the congruent triangles created by the diagonal

$$\triangle ABC \cong \triangle CDA$$

Mark the figure appropriately!



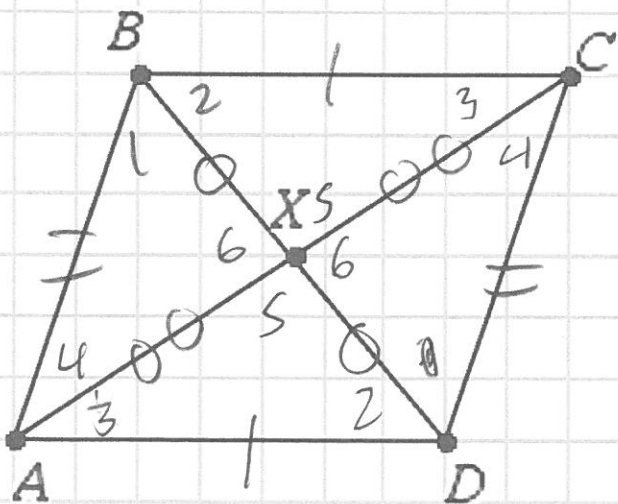
State the congruent angles created by the diagonal

$$\begin{aligned} \angle C &\cong \angle A \text{ (opp } \angle\text{s)} \\ \angle BDC &\cong \angle DBA \text{ (alt int } \angle\text{s)} \\ \angle CBD &\cong \angle ADB \text{ (alt int } \angle\text{s)} \end{aligned}$$

State the congruent triangles created by the diagonal

$$\triangle BCD \cong \triangle DAB$$

Mark the figure appropriately!



State the congruent angles created by the TWO diagonals that have NOT already been stated

$$\begin{aligned} \angle XBC &\cong \angle XDA, \angle XCB \cong \angle XAD \\ \angle XDC &\cong \angle XBA, \angle XDA \cong \angle XBC \\ \angle BXA &\cong \angle DXC, \angle BXC \cong \angle DXA \end{aligned}$$

State the congruent triangles created by the TWO diagonals that have not already been stated

$$\begin{aligned} \triangle BXC &\cong \triangle DXC \\ \triangle DXC &\cong \triangle BXA \end{aligned}$$

Name the congruent segments created by the two diagonals

$$\overline{BX} \cong \overline{XD}, \overline{AX} \cong \overline{XC}$$

Mark the figure appropriately!