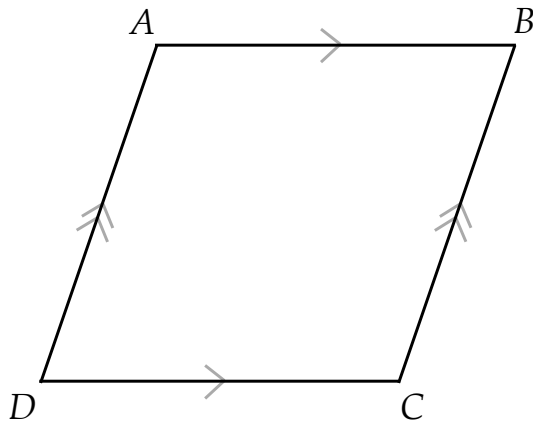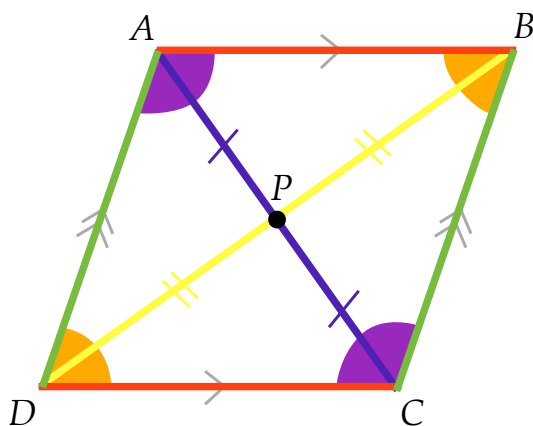Name _____

Date _____ Period _____

Rhombus

A rhombus is a parallelogram with four congruent sides.

A ⟩ B

D ⟩ C

1. Opposite Sides are congruent

2. Opposite angles are congruent

3. The diagonals bisect each other

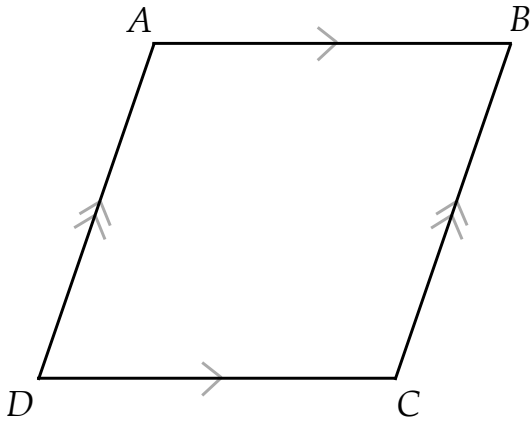4. Consecutive Angles are Supplementary

Rhombus

A rhombus is a parallelogram with four congruent sides.

A ⟩ B

P

D ⟩ C

1. Opposite Sides are congruent

$$\overline{AB} \cong \overline{DC} \quad \overline{DA} \cong \overline{CB}$$

2. Opposite angles are congruent

$$\angle A \cong \angle C \quad \angle D \cong \angle B$$

3. The diagonals bisect each other

$$\overline{AP} \cong \overline{CP} \quad \overline{DP} \cong \overline{BP}$$

4. Consecutive Angles are Supplementary

$\angle A$ and $\angle D$ are suppl. $\angle A$ and $\angle B$ are suppl.

$\angle B$ and $\angle C$ are suppl. $\angle D$ and $\angle C$ are suppl.
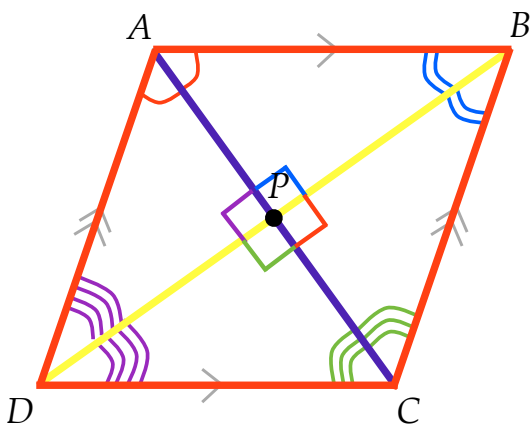
Rhombus

A rhombus is a parallelogram with four congruent sides.

A _____ B

D _____ C

1. All sides are congruent
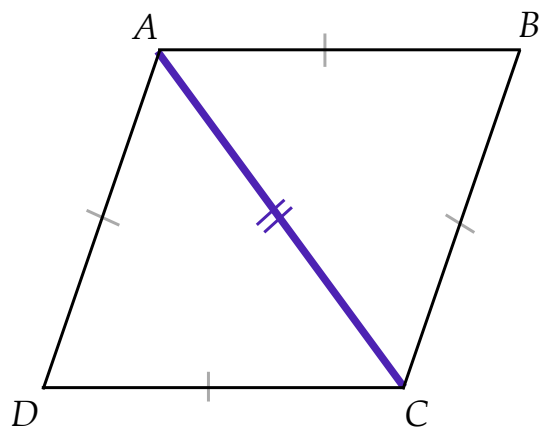
2. Diagonals are perpendicular

3. Diagonals bisect angles

Rhombus

A rhombus is a parallelogram with four congruent sides.

A _____ B

P

D _____ C

1. All sides are congruent

$$\overline{AB} \cong \overline{BC} \cong \overline{DC} \cong \overline{AD}$$

2. Diagonals are perpendicular

$\angle APB$ is a right angle $\angle CPD$ is a right angle

$\angle BPC$ is a right angle $\angle DPA$ is a right angle

3. Diagonals bisect angles

Rhombus
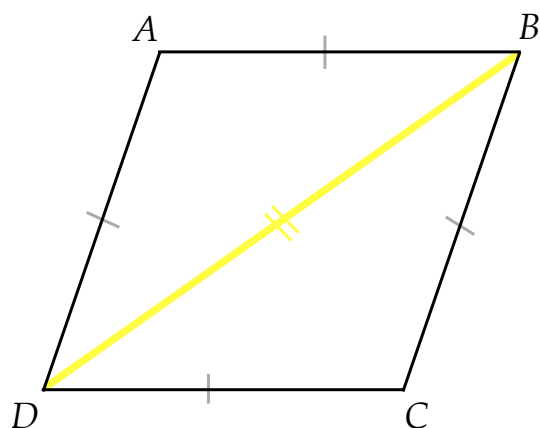
A rhombus is a parallelogram with four congruent sides.

Triangles within Rhombi

ΔABC and ΔCDA are isosceles triangles

$\Delta ABC \cong \Delta CDA$

Rhombus

A rhombus is a parallelogram with four congruent sides.

Triangles within Rhombi

ΔABC and ΔCDA are isosceles triangles

$\Delta ABC \cong \Delta CDA$

ΔBAD and ΔDCB are isosceles triangles

$\Delta BAD \cong \Delta DCB$

Rhombus

A rhombus is a parallelogram with four congruent sides.

Triangles within Rhombi

$\triangle ABC$ and $\triangle CDA$ are isosceles triangles

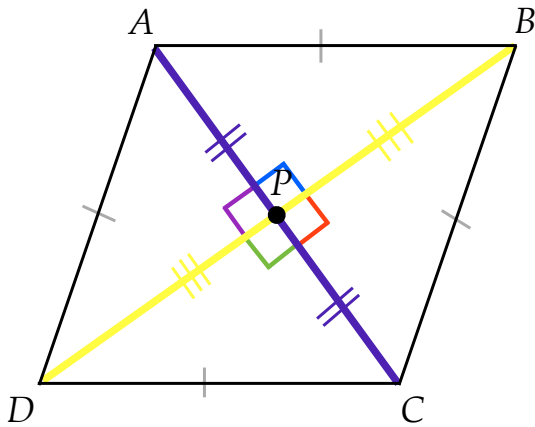$\triangle ABC \cong \triangle CDA$

$\triangle BAD$ and $\triangle DCB$ are isosceles triangles

$\triangle BAD \cong \triangle DCB$

$\triangle APD$, $\triangle BPC$, $\triangle APB$, $\triangle DPC$ are right triangles

$\triangle APD \cong \triangle BPC \cong \triangle APB \cong \triangle DPC$