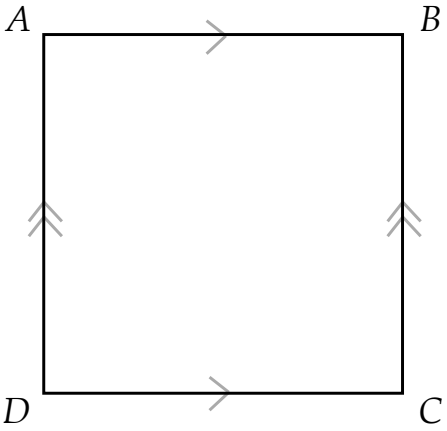
Properties of Squares

Name _____

Date _____ Period _____

Square

A square is a special parallelogram having the characteristics of both a rectangle and a rhombus.



1. Opposite Sides are congruent

2. Opposite angles are congruent

3. The diagonals bisect each other

4. Consecutive Angles are Supplementary

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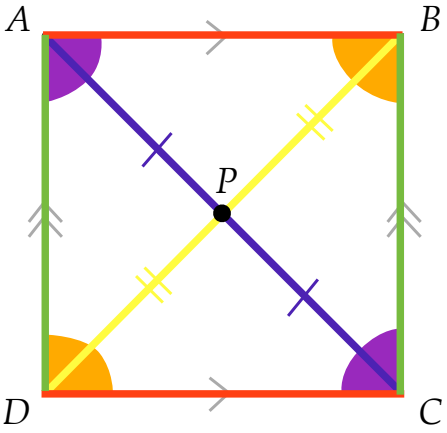
A square is a special parallelogram having the characteristics of both a rectangle and a rhombus.



1. Opposite Sides are congruent

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

2. Opposite angles are congruent

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

3. The diagonals bisect each other

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

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.

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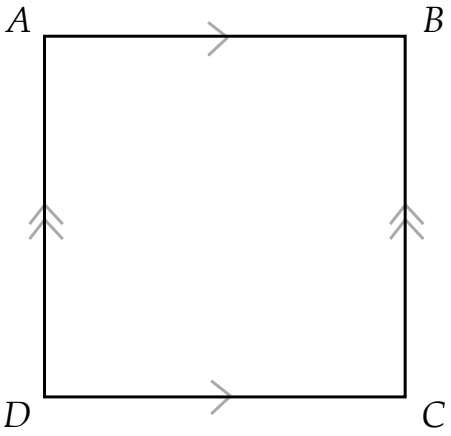

1. All angles are right angles

2. Diagonals are congruent

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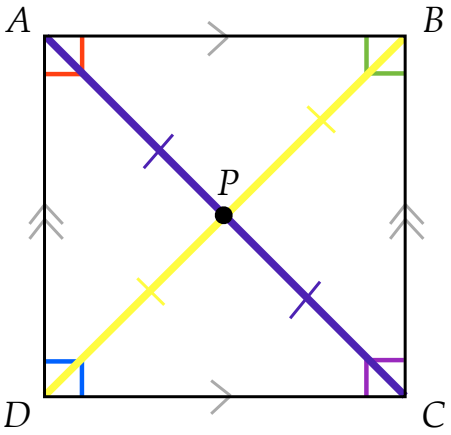

1. All angles are right angles

$\angle A$ is a right angle $\angle C$ is a right angle

$\angle B$ is a right angle $\angle D$ is a right angle

2. Diagonals are congruent

$\overline{AC} \cong \overline{BD}$

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

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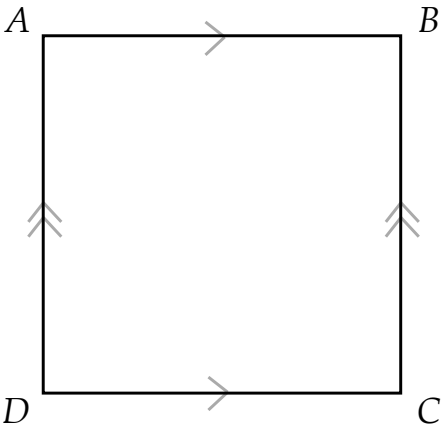

1. All sides are congruent

2. Diagonals are perpendicular

3. Diagonals bisect angles

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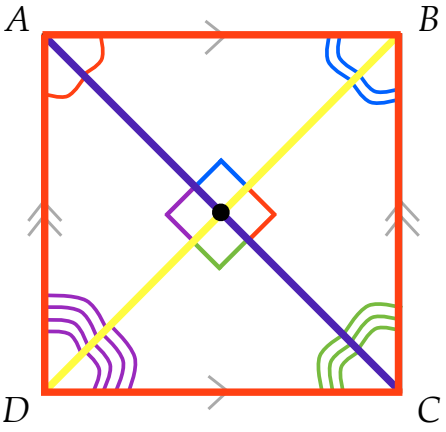

1. All sides are congruent

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

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

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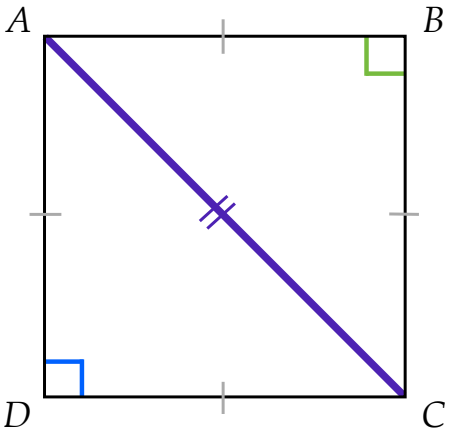

Triangles within Squares

ΔABC and ΔCDA are right triangles

$\Delta ABC \cong \Delta CDA$

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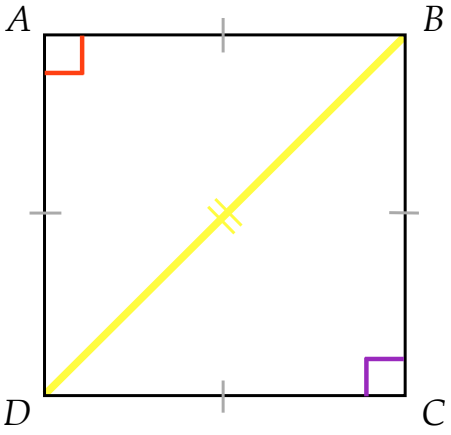

Triangles within Squares

ΔABC and ΔCDA are right triangles

$\Delta ABC \cong \Delta CDA$

ΔBAD and ΔDCB are right triangles

$\Delta BAD \cong \Delta DCB$

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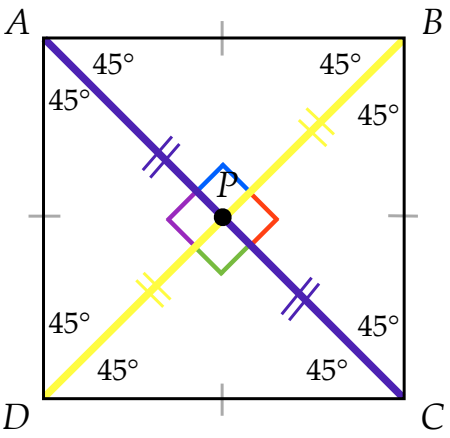

Triangles within Squares

ΔABC and ΔCDA are right triangles

$\Delta ABC \cong \Delta CDA$

ΔBAD and ΔDCB are right triangles

$\Delta BAD \cong \Delta DCB$

ΔAPD, ΔBPC, ΔAPB, ΔDPC are special 45°-45°-90° right triangles

$\Delta APD \cong \Delta BPC \cong \Delta APB \cong \Delta DPC$