Properties of Kites
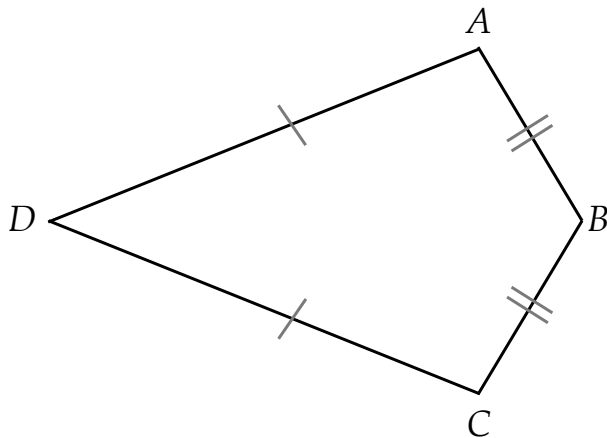
Kite

A kite is quadrilateral with exactly two distinct pairs of adjacent congruent sides.

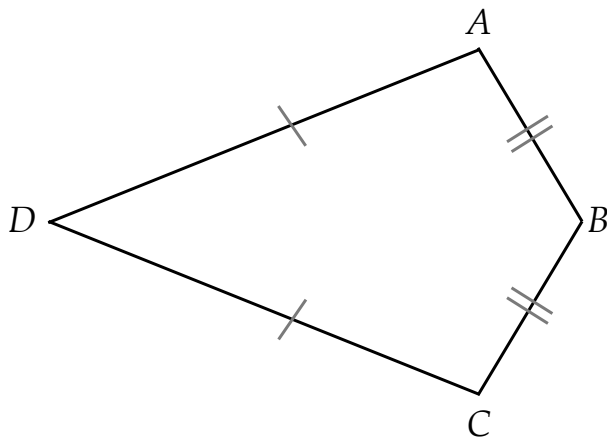*A*

$\overline{DA}$ and $\overline{DC}$ is one pair of adjacent congruent sides

D

B

$\overline{AB}$ and $\overline{BC}$ is the other pair of adjacent congruent sides

C

Kite

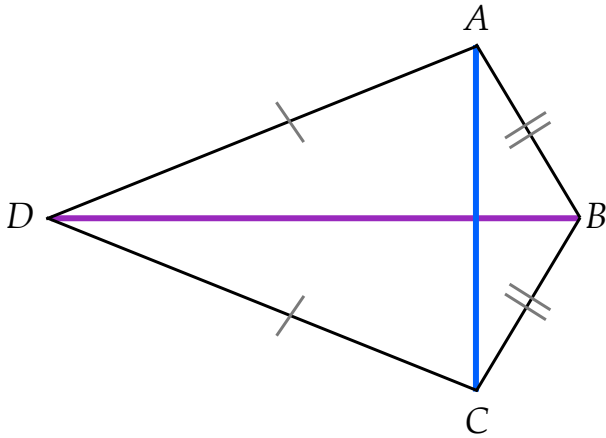A kite is quadrilateral with exactly two distinct pairs of adjacent congruent sides.

A

Properties of a Kite

The angles between two non-congruent sides of a kite are congruent.

D

B

C

Kite

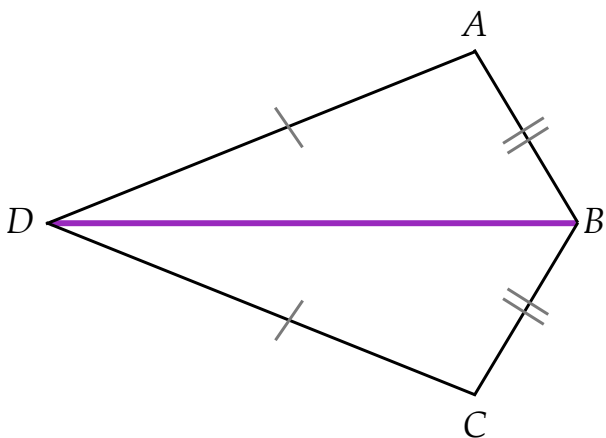A kite is quadrilateral with exactly two distinct pairs of adjacent congruent sides.

Properties of a Kite

The diagonals of a kite are perpendicular

$\overline{DB}$ and $\overline{AC}$ are diagonals of kite $ABCD$

Kite

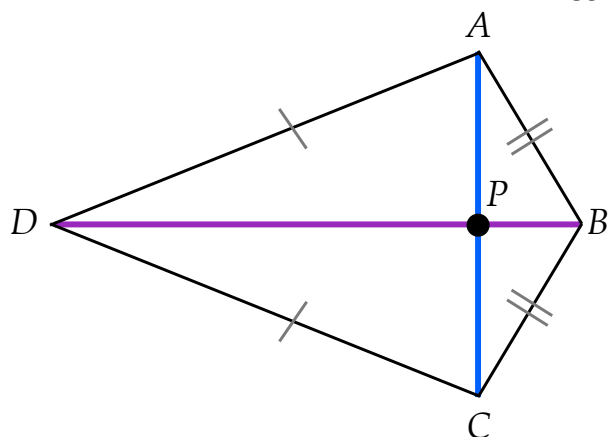A kite is quadrilateral with exactly two distinct pairs of adjacent congruent sides.

Properties of a Kite
A diagonal bisects the two non-congruent angles

$\angle D$ and $\angle B$ are the two non-congruent angles of kite $ABCD$.

Kite

A kite is quadrilateral with exactly two distinct pairs of adjacent congruent sides.

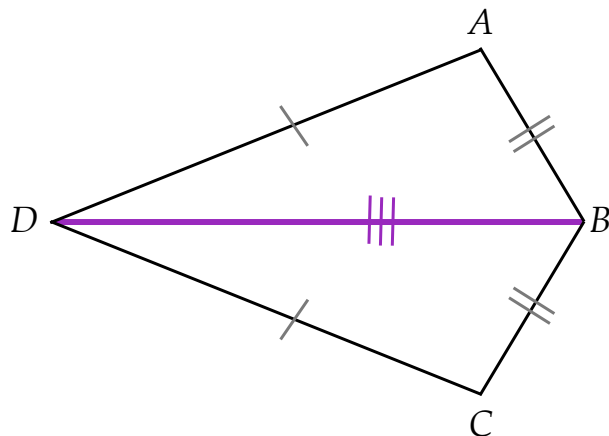Properties of a Kite

One diagonal bisects the other diagonal

$\overline{DB}$ bisects $\overline{AC}$

Kite

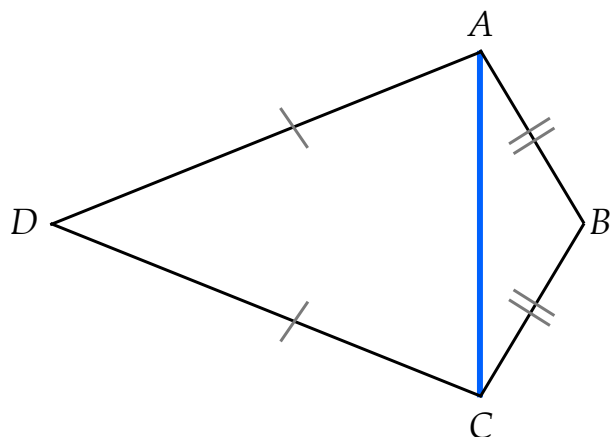A kite is quadrilateral with exactly two distinct pairs of adjacent congruent sides.

Triangles in a Kite

$\Delta ABD \cong \Delta CBD$

Kite

A kite is quadrilateral with exactly two distinct pairs of adjacent congruent sides.

A

D

B

C
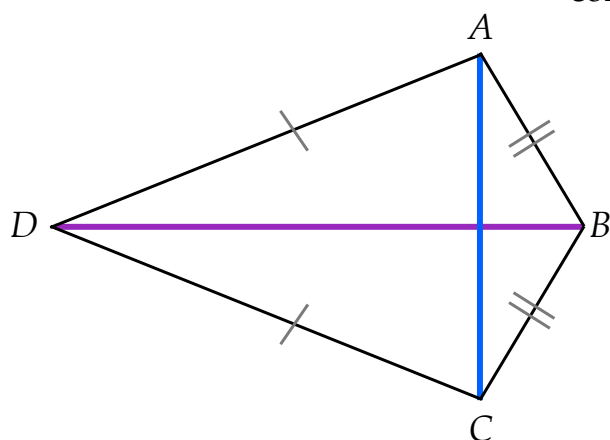
Triangles in a Kite

$\Delta ABD \cong \Delta CBD$

ΔDAC and ΔABC are isosceles triangles

Kite

A

D

B

C

Triangles in a Kite

$\Delta ABD \cong \Delta CBD$

ΔDAC and ΔABC are isosceles triangles

ΔDPA is a right triangle ΔAPB is a right triangle
ΔDPC is a right triangle ΔBPC is a right triangle

$\Delta APD \cong \Delta CPD$ $\Delta APB \cong \Delta CPB$