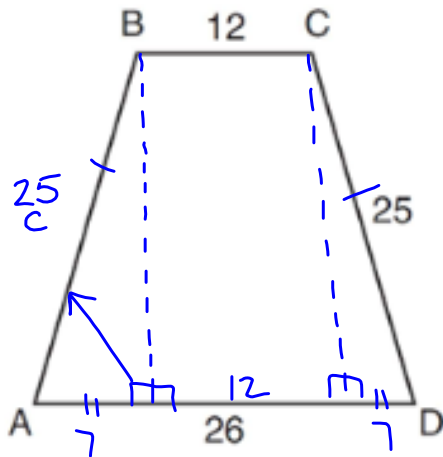


DO NOW

In the diagram below of isosceles trapezoid $ABCD$, $AB = CD = 25$, $AD = 26$, and $BC = 12$.

What is the length of an altitude of the trapezoid?



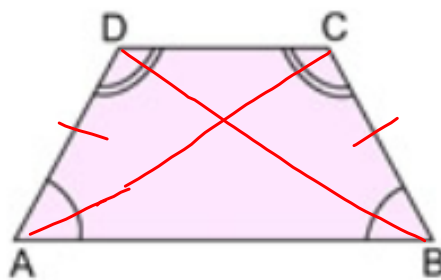
$$7^2 + b^2 = 25^2$$

$$b^2 = 576$$

$$b = 24$$

Dec 4-8:37 AM

A isosceles trapezoid is a trapezoid with congruent base angles.



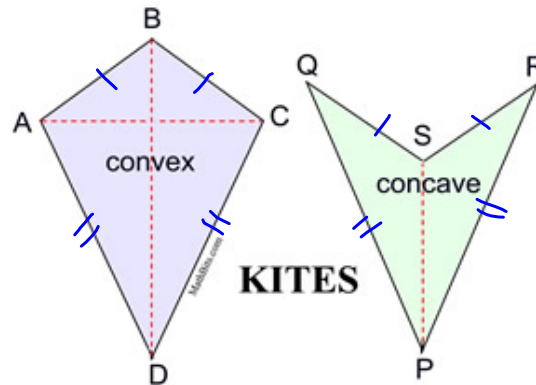
If a quadrilateral is an isosceles trapezoid,

- the diagonals are congruent
- the opposite angles are supplementary

$$\angle D + \angle B = 180$$

Dec 4-8:26 AM

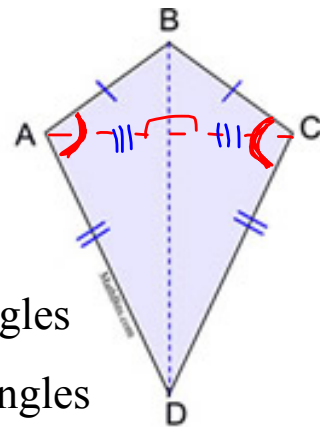
A kite is a quadrilateral such that there are two **distinct sets** of adjacent, congruent sides.



Dec 4-8:27 AM

If a quadrilateral is a kite,

- the diagonals are perpendicular
- one pair of opposite angles congruent
- one diagonal forms two isosceles triangles
- one diagonal forms two congruent triangles



If one of the diagonals of a quadrilateral is the perpendicular bisector of the other, the quadrilateral is a kite

$\overline{BD} \perp$ bisector
of \overline{AC}

Dec 4-8:33 AM