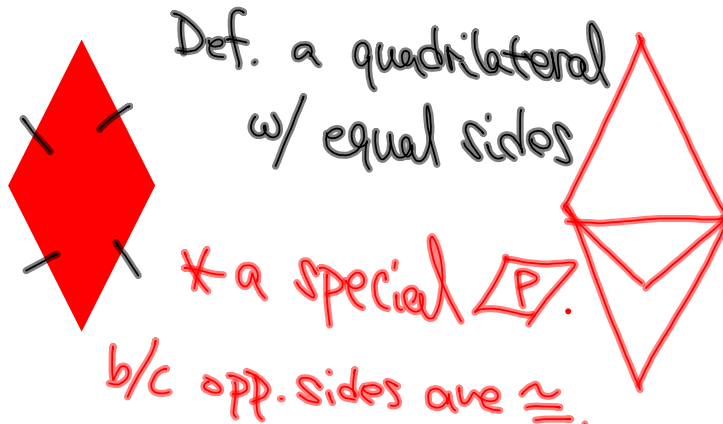


What is a Rhombus?

Do Now Sketch a diamond shape from a standard deck of cards.



Rhombus.

Def a quadrilateral w/ $\cong$ sides.
(equilateral quadrilateral)

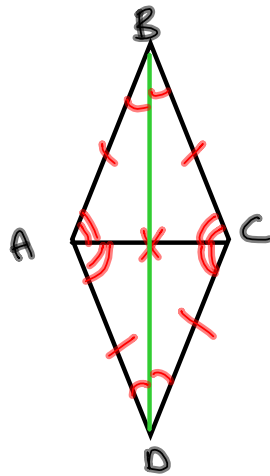
Prop.

1) * All prop. (inc. def.) of $\square$ are true.

2) diag. bisect vertex $\angle$'s.

3) diag. are $\perp$ to each other.

4) " form $\triangle$ $\cong$ Δ 's.

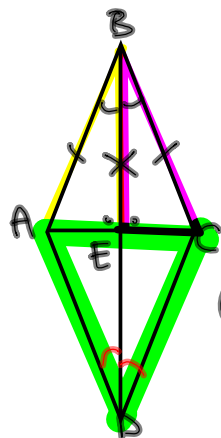


Given: $\overline{AB} \cong \overline{BC} \cong \overline{CD} \cong \overline{AD}$

Prove: $\angle BAC \cong \angle DAC$

$\triangle ABC \cong \triangle ADC$ by SSS.

by CPCTC



Given ABCD is $\diamond$.

$\overline{AC}$ & $\overline{BD}$ are diagonals.

Prove: $\overline{AC} \perp \overline{BD}$

① Show that $\triangle ABE \cong \triangle CBE$ by SAS

$\angle AEB$ & $\angle CEB$ are $\cong$ & linear pair

$\hookrightarrow \angle AEB$ & $\angle CEB$ are R+X's

$\hookrightarrow \overline{AC} \perp \overline{BD}$

② Since $\triangle ADC$ is isos. & $\overline{BD}$ is a diagonal of ABCD, $\overline{BD}$ is an $\angle$ bisector.
in an isos. $\triangle$, $\angle$ bisector is also an altitude
 $\therefore \overline{DE} \perp \overline{AC}$

