Geometry CC – Mr. Valentino
Unit 9 Lesson 8: Proving Rhombuses

Name: _____
Date: _____ Per: _____

Aim: How can we prove a quadrilateral is a rhombus?

Do Now: What make a rhombus different from all parallelograms?

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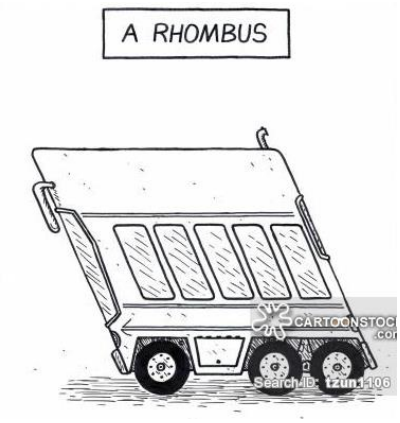
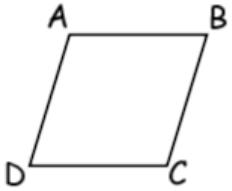


1. Given: AD ≅ BC, AD||BC

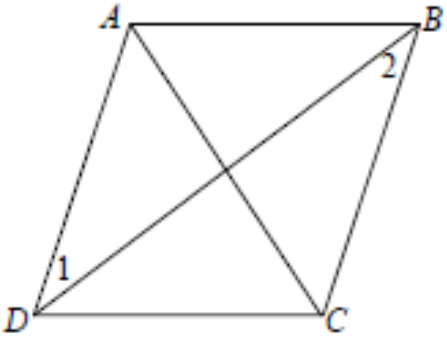
AD ≅ AB

Prove: ABCD is a rhombus



2. Given: $\overline{AD} \cong \overline{BC}$,
$\angle 1 \cong \angle 2$,
$\overline{AB} \cong \overline{BC}$

Prove: *ABCD* is a rhombus.

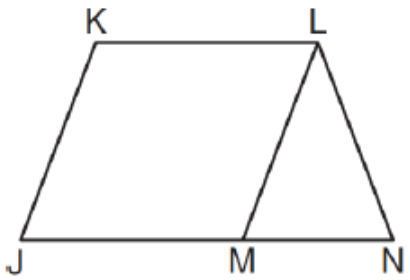


3) Given: $JKLM$ is a parallelogram.

$\overline{JM} \cong \overline{LN}$

$\angle LMN \cong \angle LNM$

Prove: $JKLM$ is a rhombus.

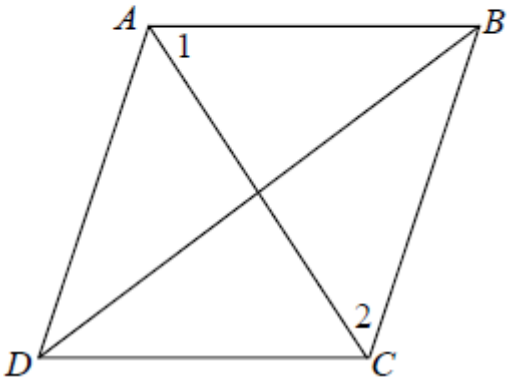


4. Given: $\overline{AB} \parallel \overline{DC}$,

$\overline{AD} \parallel \overline{BC}$,

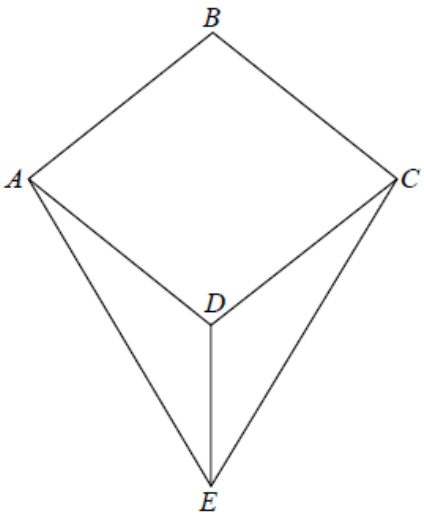
$\angle 1 \cong \angle 2$

Prove: $ABCD$ is a rhombus.



5. Given: Rhombus $ABCD$,
$\overline{AE} \cong \overline{CE}$

Prove: $\Delta ADE \cong \Delta CDE$



6. Given: AECB is a rhombus,
$\overline{AED}$, $\overline{FEC}$
$\angle FAB \cong \angle DCB$

Prove: $\overline{FE} \cong \overline{DE}$