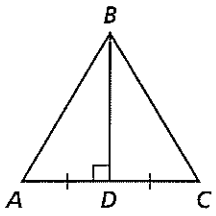
Name _____ Class _____ Date _____

Practice 4-4

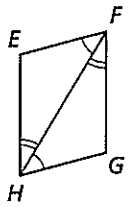
Using Congruent Triangles: CPCTC

Explain how you can use SSS, SAS, ASA, or AAS with CPCTC to prove each statement true.

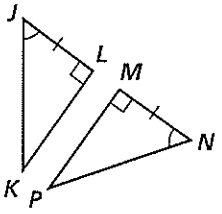
1. $\angle A \cong \angle C$



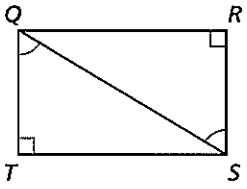
2. $\overline{HE} \cong \overline{FG}$



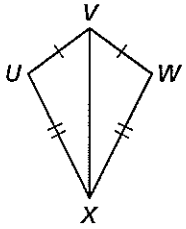
3. $\angle K \cong \angle P$



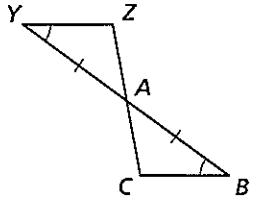
4. $\angle QST \cong \angle SQR$



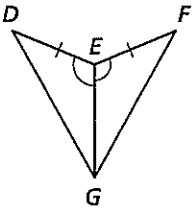
5. $\angle U \cong \angle W$



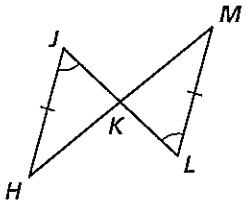
6. $\overline{ZA} \cong \overline{AC}$



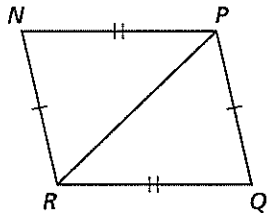
7. $\overline{FG} \cong \overline{DG}$



8. $\overline{JK} \cong \overline{KL}$

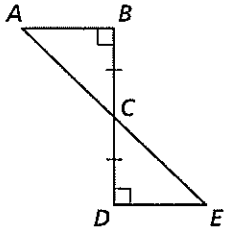


9. $\angle N \cong \angle Q$

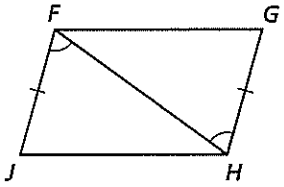


Write a Plan for Proof.

10. Given: $\overline{BD} \perp \overline{AB}$, $\overline{BD} \perp \overline{DE}$, $\overline{BC} \cong \overline{CD}$
Prove: $\angle A \cong \angle E$



11. Given: $\overline{FJ} \cong \overline{GH}$, $\angle JFH \cong \angle GHF$
Prove: $\overline{FG} \cong \overline{JH}$



Name _____ Class _____ Date _____

Reteaching 4-5

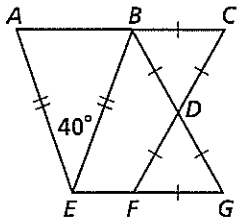
Isosceles and Equilateral Triangles

OBJECTIVE: Using and applying properties of isosceles triangles

MATERIALS: None

Example

Find $m\angle ABE$.



Because $AE \cong BE$, $m\angle EAB \cong m\angle ABE$.

$m\angle EAB + m\angle ABE + m\angle AEB = 180$		Triangle Angle-Sum Theorem
$m\angle EAB + m\angle ABE + 40 = 180$		Substitution
$m\angle EAB + m\angle ABE = 140$		Subtraction Property of Equality
$2m\angle ABE = 140$		Substitution
$m\angle ABE = 70$		Division Property of Equality

Exercises

Work with a partner to find the measures of the angles of quadrilateral *BDFE* in the diagram above.

1. Find the measures of the angles of $\triangle CBD$ and $\triangle FDG$.
2. Use the Angle Addition Postulate to find $m\angle BDF$.
3. Use the Angle Addition Postulate to find $m\angle EFC$.
4. Use the Angle Addition Postulate to find $m\angle EBG$.
5. Use the Polygon Interior Angle-Sum Theorem to find $m\angle BEF$.

Find the measure of each angle.

6. $m\angle BCA$
7. $m\angle DCE$
8. $m\angle DEF$
9. $m\angle BCD$
10. $m\angle BAG$
11. $m\angle GAH$