Name _____ Class _____ Date _____

Reteaching 4-5

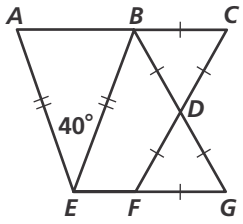
Isosceles and Equilateral Triangles

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. $m\angle GAH$