LESSON
1-3
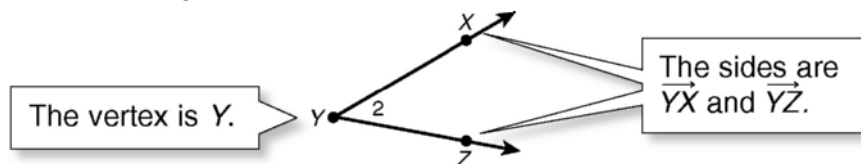
Reteach

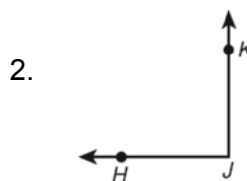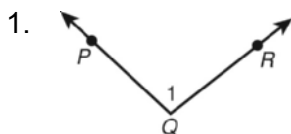### Measuring and Constructing Angles

An **angle** is a figure made up of two rays, or **sides,** that have a common endpoint, called the **vertex** of the angle.
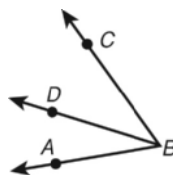

There are four ways to name this angle.

$\angle Y$	Use the vertex.
$\angle XYZ$ or $\angle ZYX$	Use the vertex and a point on each side.
$\angle 2$	Use the number.

Name each angle in three ways.

1.

2.

_____   _____

3. Name three different angles in the figure.

_____

Angle	acute	right	obtuse	straight
Model				
Possible Measures	$0° < a° < 90°$	$a° = 90°$	$90° < a° < 180°$	$a° = 180°$

Classify each angle as acute, right, obtuse, or straight.

4. $\angle NMP$

_____

5. $\angle QMN$
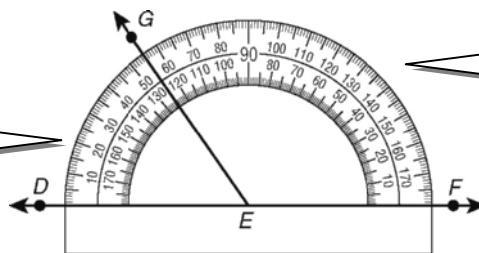
_____

6. $\angle PMQ$

_____
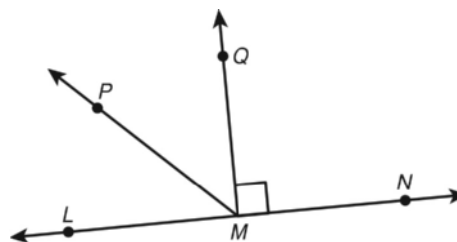
LESSON
1-3

Reteach

Measuring and Constructing Angles continued

You can use a protractor to find the measure of an angle.
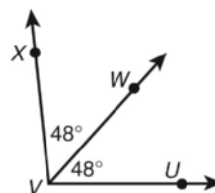
∠*DEG* is acute.

∠*GEF* is obtuse.

Use the figure above to find the measure of each angle.

7. ∠*DEG*

8. ∠*GEF*

The measure of ∠*XVU* can be found by adding.

m∠*XVU* = m∠*XVW* + m∠*WVU*

$= 48° + 48°$

$= 96°$

Angles are **congruent** if their measures are equal. In the figure, ∠*XVW* ≅ ∠*WVU* because the angles have equal measures. $\overrightarrow{VW}$ is an **angle bisector** of ∠*XVU* because it divides ∠*XVU* into two congruent angles.

Find each angle measure.
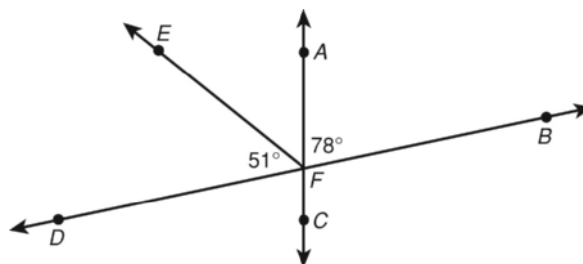
9. m∠*CFB* if ∠*AFC* is a straight angle.

10. m∠*EFA* if the angle is congruent to ∠*DFE*.

11. m∠*EFC* if ∠*DFC* ≅ ∠*AFB*.

12. m∠*CFG* if $\overrightarrow{FG}$ is an angle bisector of ∠*CFB*.

7. $7.5 < x < 22.5$

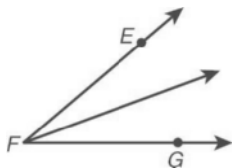8. back $2\frac{1}{2}$ somersault $2\frac{1}{2}$ twists

9. 68°

10. No, $\overrightarrow{WZ}$ does not have to be the angle bisector of ∠XWY.

Reteach

1. ∠Q, ∠PQR, ∠1

2. ∠J, ∠HJK, ∠KJH

3. ∠ABD, ∠ABC, ∠DBC

4. obtuse	5. right
6. acute	7. 55°
8. 125°	9. 102°
10. 51°	11. 129°
12. 51°	

Challenge

1.

2. angle bisector

3. It is double the number of cuts.

4. $360 \div (2n)$ or $180 \div n$

5. 20; 18°

Problem Solving

1. Sample answer: ∠LKG, ∠GKH, ∠HKJ, ∠JKL, ∠LKH

2. 103°	3. 100°
4. 65°	5. 27°
6. A	7. J

Reading Strategies

1. obtuse	2. acute
3. right	4. right
5. straight	6. obtuse
7. acute	8. obtuse
9. obtuse	10. straight
11. right	12. acute

13. Check students' drawings.

14. Check students' drawings.

15. Check students' drawings.

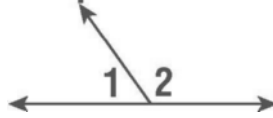16. Check students' drawings.

LESSON 1-4

Practice A

1. vertex; side	2. linear pair
3. 90°	4. right angle
5. Supplementary	6. straight angle

7. Sample answer:
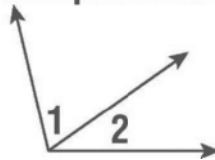
8. Sample answer:

9. 120°	10. 30.

11. Possible answer:
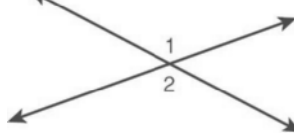
Practice B

1. 180° 2. $\overrightarrow{QR}$

3. 137.9° 4. $(110 - 8x)°$

5. 132° 6. 135°

7. m∠DEF = 29°; m∠FEG = 61°

8. m∠DEF = 91°; m∠FEG = 89°

9. Possible answers: ∠1 and ∠3 or ∠2 and ∠4

10. Possible answers: ∠1 and ∠2; ∠2 and ∠3; ∠3 and ∠4; or ∠1 and ∠4

11. right 12. 45°; 45°

Practice C

1, 2, 3. Possible answer:

Holt Geometry