

GUIDED PRACTICE

Vocabulary Check ✓

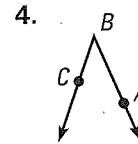
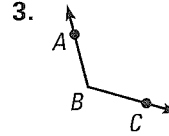
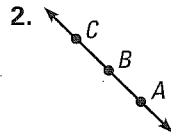
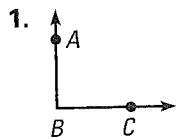
Match the angle with its classification.

A. acute

B. obtuse

C. right

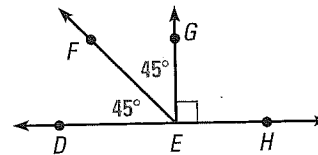
D. straight



Concept Check ✓

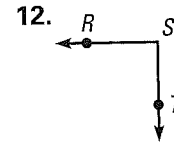
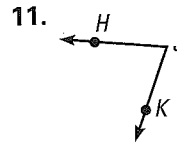
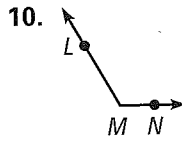
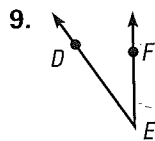
Use the diagram at the right to answer the questions. Explain your answers.

5. Is $\angle DEF \cong \angle FEG$?
6. Is $\angle DEG \cong \angle HEG$?
7. Are $\angle DEF$ and $\angle FEH$ adjacent?
8. Are $\angle GED$ and $\angle DEF$ adjacent?



Skill Check ✓

Name the vertex and sides of the angle. Then estimate its measure.



Classify the angle as *acute*, *obtuse*, *right*, or *straight*.

13. $m\angle A = 180^\circ$

14. $m\angle B = 90^\circ$

15. $m\angle C = 100^\circ$

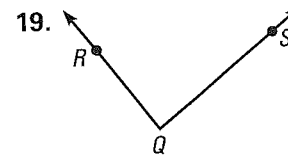
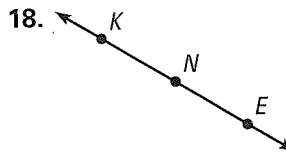
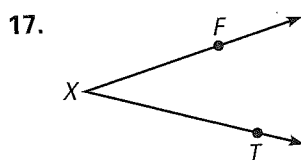
16. $m\angle D = 45^\circ$

PRACTICE AND APPLICATIONS

STUDENT HELP

Extra Practice
to help you master
skills is on pp. 803
and 804.

NAMING PARTS Name the vertex and sides of the angle.

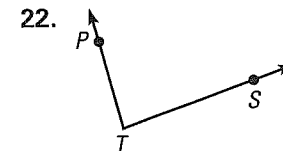
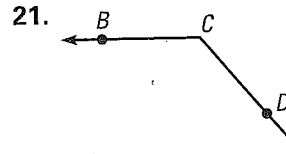
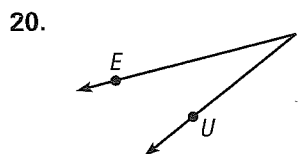


STUDENT HELP

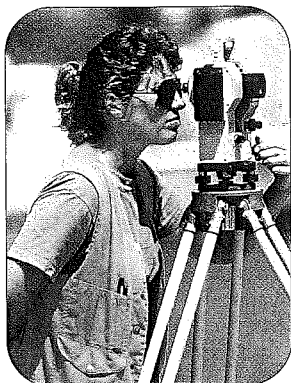
HOMEWORK HELP

- Example 1: Exs. 17–22
- Example 2: Exs. 23–34
- Example 3: Exs. 35–43
- Example 4: Exs. 38, 39

NAMING ANGLES Write two names for the angle.



FOCUS ON CAREERS



SURVEYOR

Surveyors use a tool called a theodolite, which can measure angles to the nearest $\frac{1}{3600}$ of a degree.

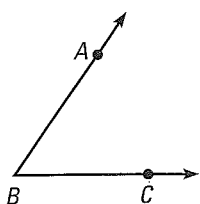


CAREER LINK

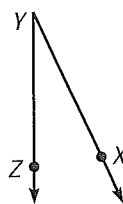
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MEASURING ANGLES Copy the angle, extend its sides, and use a protractor to measure it to the nearest degree.

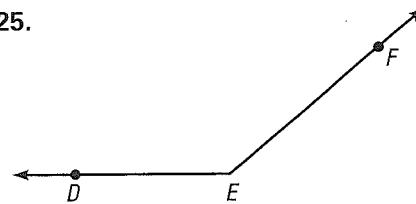
23.



24.



25.

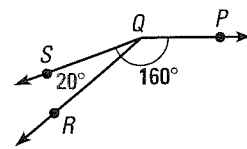
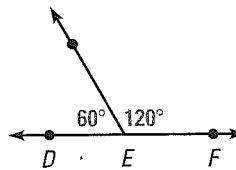
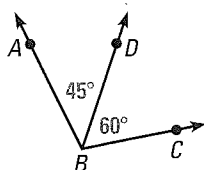


ANGLE ADDITION Use the Angle Addition Postulate to find the measure of the unknown angle.

26. $m\angle ABC = ?$

27. $m\angle DEF = ?$

28. $m\angle PQR = ?$



LOGICAL REASONING Draw a sketch that uses all of the following information.

- D is in the interior of $\angle BAE$.
- E is in the interior of $\angle DAF$.
- F is in the interior of $\angle EAC$.

- $m\angle BAC = 130^\circ$
- $m\angle EAC = 100^\circ$
- $m\angle BAD = m\angle EAF = m\angle FAC$

29. Find $m\angle FAC$.

30. Find $m\angle BAD$.

31. Find $m\angle FAB$.

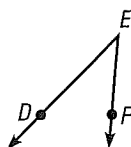
32. Find $m\angle DAE$.

33. Find $m\angle FAD$.

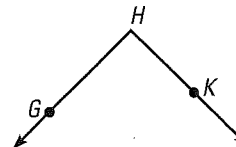
34. Find $m\angle BAE$.

CLASSIFYING ANGLES State whether the angle appears to be *acute*, *right*, *obtuse*, or *straight*. Then estimate its measure.

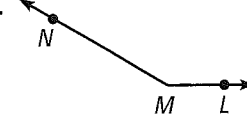
35.



36.



37.



LOGICAL REASONING Draw five points, A , B , C , D , and E so that all three statements are true.

- 38. $\angle DBE$ is a straight angle.
- $\angle DBA$ is a right angle.
- $\angle ABC$ is a straight angle.

- 39. C is in the interior of $\angle ADE$.
- $m\angle ADC + m\angle CDE = 120^\circ$.
- $\angle CDB$ is a straight angle.

USING ALGEBRA In a coordinate plane, plot the points and sketch $\triangle ABC$. Classify the angle. Write the coordinates of a point that lies in the interior of the angle and the coordinates of a point that lies in the exterior of the angle.

- 40. $A(3, -2)$
- $B(5, -1)$
- $C(4, -4)$

- 41. $A(5, -1)$
- $B(3, -2)$
- $C(4, -4)$

- 42. $A(5, -1)$
- $B(3, -2)$
- $C(0, -1)$

- 43. $A(-3, 1)$
- $B(-2, 2)$
- $C(-1, 4)$