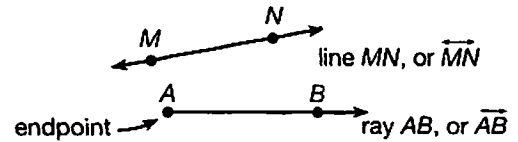# SKILL 1: Lines and Angles

A **line** is straight and extends without end in two directions. A **ray** is straight but extends without end in only one direction. The point where a ray starts is its **endpoint**.
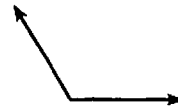
line MN, or $\overleftrightarrow{MN}$

endpoint → ray AB, or $\overrightarrow{AB}$

Two rays with the same endpoint form an **angle**. The rays are the **sides** of the angle. The shared endpoint is the **vertex** of the angle.

vertex side

∠Q or ∠1 or ∠PQR or ∠RQP
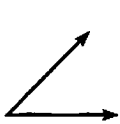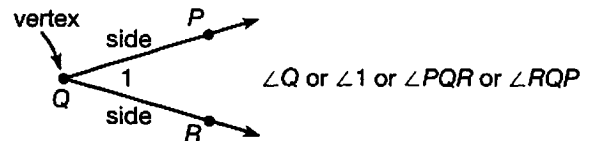
An acute angle has a measure less than 90°.
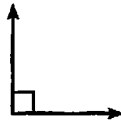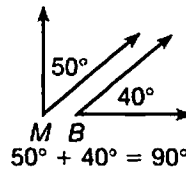
A right angle has a measure of exactly 90°.

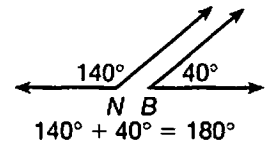An obtuse angle has a measure greater than 90° and less than 180°.

A straight angle has a measure of exactly 180°.

Two angles are **complementary** if the sum of their measures is 90°

Two angles are **supplementary** if the sum of their measures is 180°

50°
40°
M B
50° + 40° = 90°
∠M is the complement of ∠B.

140° 40°
N B
140° + 40° = 180°
∠N is the supplement of ∠B.

Example

Find the measures of the complement and the supplement of ∠N.

A complement of ∠N measures 90° − 54° = 36°.
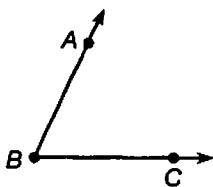A supplement of ∠N measures 180° − 54° = 126°.

54°
N
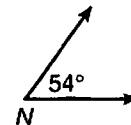
Guided Practice

1. What is the vertex of the angle at the right? _____

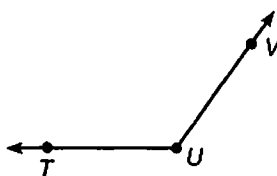**2.** What are two names for the angle at the right?

E
30°
F G
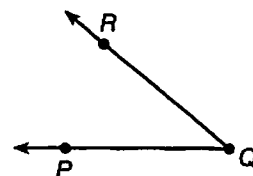
_____
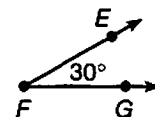
SKILL 1: Practice
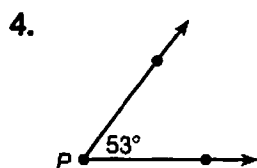
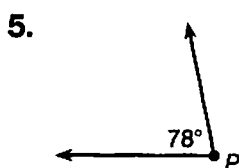**Name each angle.**

1. _____

2. _____

3. _____

Find the measure of the complement and the measure of the supplement of $\angle P$.
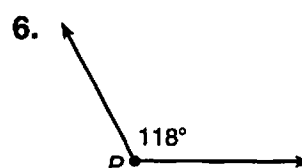
4.

complement: _____

supplement: _____
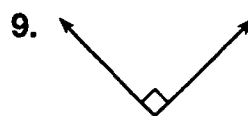
5.

complement: _____

supplement: _____

6.

complement: _____

supplement: _____

Tell whether each angle appears to be acute, obtuse, right, or straight.

7.

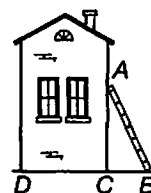_____

8.

_____

9.

_____

10.

_____

11. A ladder is leaning against the wall of a building.

   a. What kind of angle is formed by the ground and the wall? _____

   b. What angle is the supplement of $\angle ACB$? _____

TEST PREP

12. What kind of angle has a measure of 130°?

   Skill 1

   A acute   **C** right

   B obtuse   **D** straight

13. What is the measure of the supplement of a 70° angle?

   Skill 1

   F 20°   **H** 110°

   G 90°   **J** 120°