Examples
Points, Lines, and Angles

Based on power point presentations by Pearson Education, Inc.
Revised by Ingrid Stewart, Ph.D.

Learning Objectives

1. Memorize the definition of points and lines.
2. Memorize the definition of angles.
3. Name angles.
4. Measure angles.
5. Determine special angles.

Example 1: Angle Names

Identify the following figures and give them names based on their points.

a. 

b. 

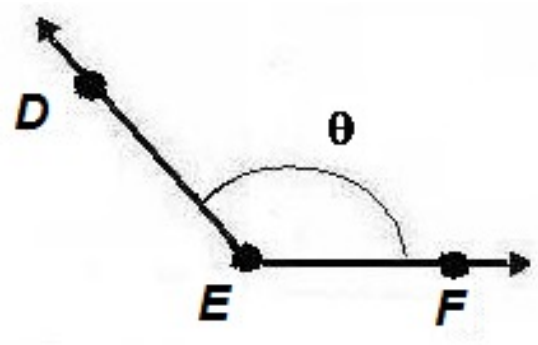
a. A LINE named $\overleftrightarrow{AB}$ or $\overleftrightarrow{BA}$

b. A LINE SEGMENT named $\overline{AB}$ or $\overline{BA}$

c. A RAY named $\overrightarrow{AB}$

Example 2: Angle Names

Express the angle below in three different ways.



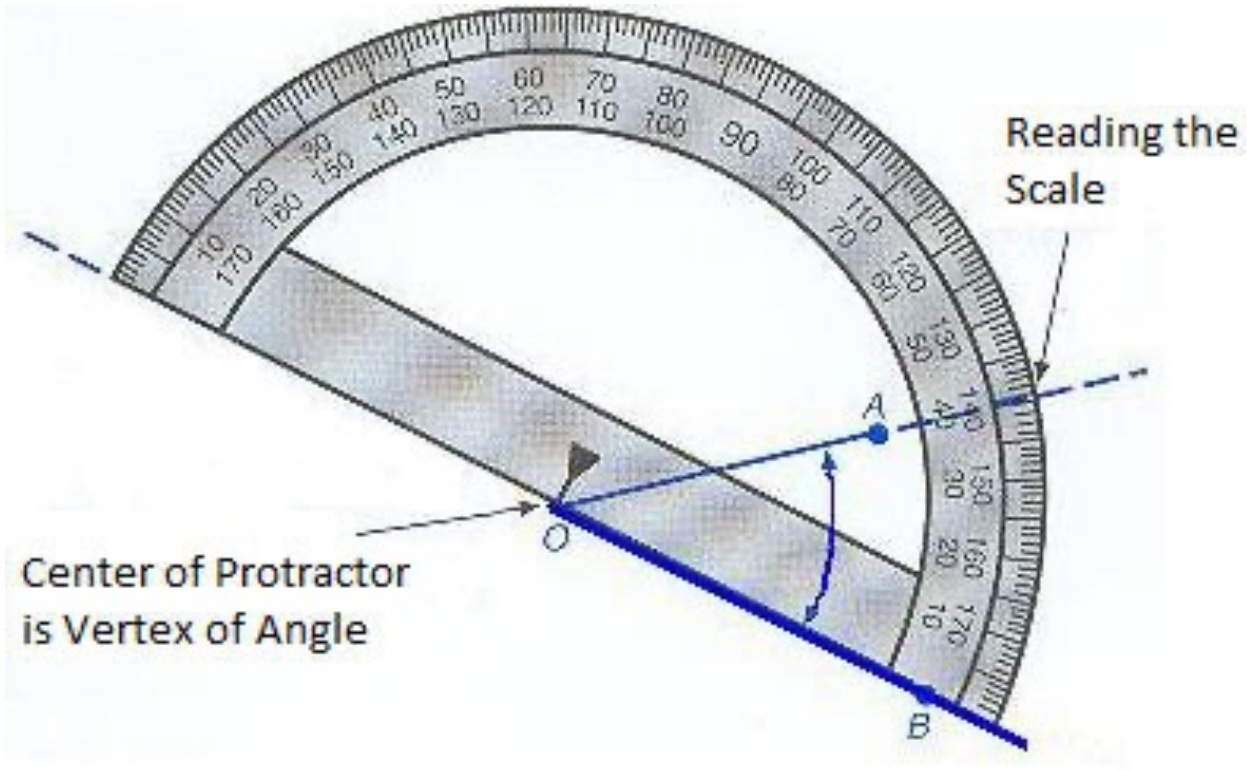
∠ DEF or ∠ FED - using points on the rays with the vertex point in the middle

∠ E - using the letter of the vertex point

∠ θ - using the Greek letter θ (theta) a commonly used name for an angle

Example 3: Measure an Angle

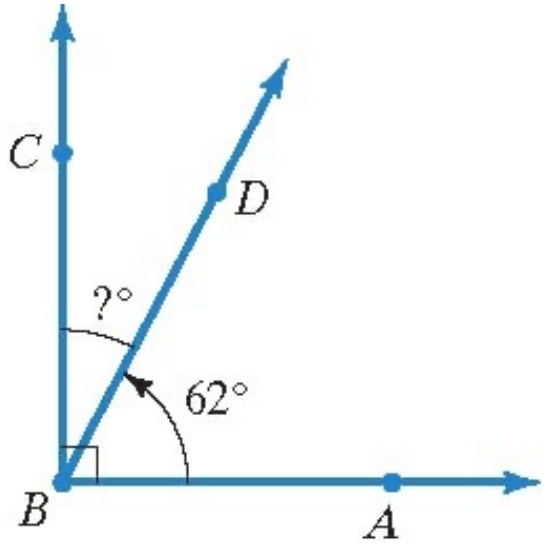
Find the measurement of ∠ AOB.



The measure of ∠ AOB is 40^{o}.

Example 4: Find Angle Measures

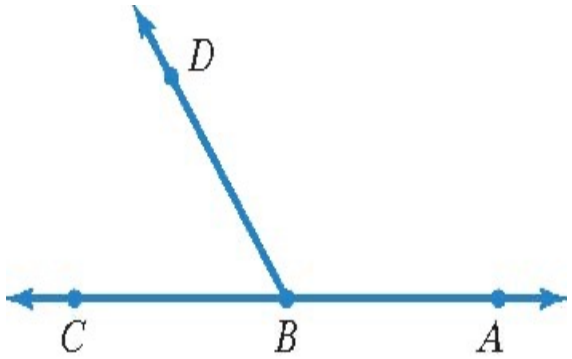
Angle *ABC* is a right angle. Find the measure of angle *DBC*.



$m \angle DBC = 90° - 62° = 28°$

Example 5: Find Angle Measures

Angle *ABC* is a straight angle. Angle *DBC* measures 57°. Find the measure of angle *ABD*.



$m \angle ABD = 180° - 57° = 123°$

Example 6: Classify Angles

Tell whether the angles are acute, obtuse, right, or straight.

a. 42^o – acute angle (less than 90^o)

b. 180^o – straight angle

c. 142^o – obtuse angle (greater than 90^o but less than 180^o)

d. 90^o – right angle

Example 7: Classify Angles

Tell whether the angle pairs are complementary, supplementary, or neither.

a. 42^o, 80^o - sum equals 122^o, which is neither complementary nor supplementary

b. 17^o, 73^o - sum equals 90^o, therefore, angles are complementary

c. 38^o, 142^o - sum equals 180^o, therefore, angles are supplementary