




# 12-4 Solve It!



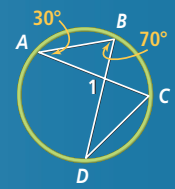


**SOLVE IT!**

**Getting Ready!**



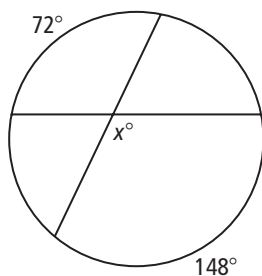
Find  $m\angle 1$  and the sum of the measures of  $\widehat{AD}$  and  $\widehat{BC}$ . What is the relationship between the measures? How do you know?



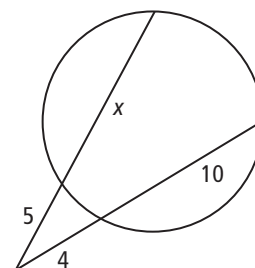
Think about how inscribed angles will help you out.

## 12-4 Lesson Quiz

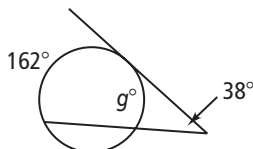
1. What is the value of the variable?



2. Do you UNDERSTAND? Find the value of the variable. If the answer is not a whole number, round to the nearest tenth.



3. What is the value of  $g$ ?



### Answers

#### Solve It!

$$m\angle 1 = \frac{1}{2}(m\widehat{AD} + m\widehat{BC}).$$

Sample explanation:

$$m\angle 1 = 100 \text{ (Exterior } \angle \text{ Thm.)};$$

$$m\angle B = \frac{1}{2}m\widehat{AD}, \text{ so}$$

$$m\widehat{AD} = 2m\angle B = 140;$$

$$m\angle A = \frac{1}{2}m\widehat{BC}, \text{ so}$$

$$m\widehat{BC} = 2m\angle A = 60; m\widehat{AD} +$$

$$m\widehat{BC} = 140 + 60 = 200;$$

$$m\angle 1 = \frac{1}{2}(m\widehat{AD} + m\widehat{BC})$$

#### Lesson Quiz

1. 110

2. 6.2

3. 86