

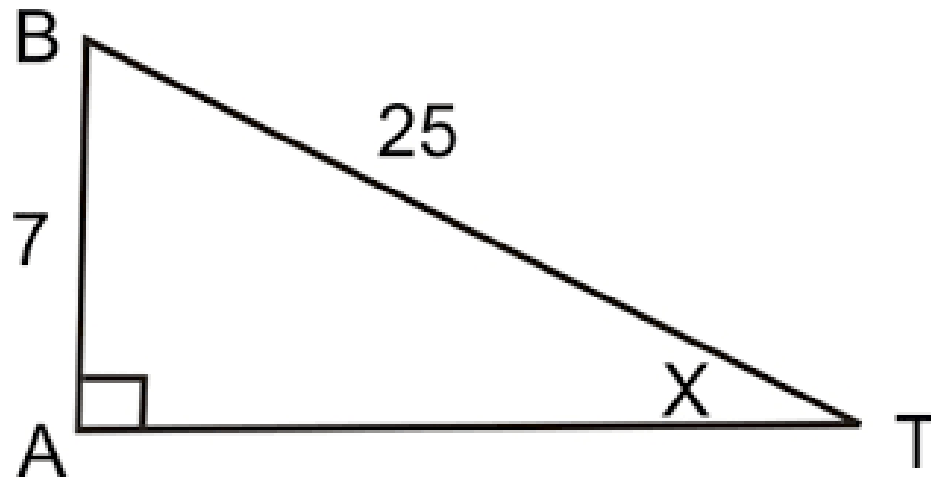
7.7

# Solve Right Triangles



# Inverse Trig Ratios

- ▶ Used to find a \_\_\_\_\_ in a \_\_\_\_\_.



# Invers Sine ( $\sin^{-1}$ )

▶ If

▶ Then

▶ EX:  $\sin\theta = 0.87$

# Inverse Cosine ( $\cos^{-1}$ )

▶ If

▶ Then

▶ EX:  $\cos\theta = \frac{1}{2}$

# Inverse Tangent ( $\tan^{-1}$ )

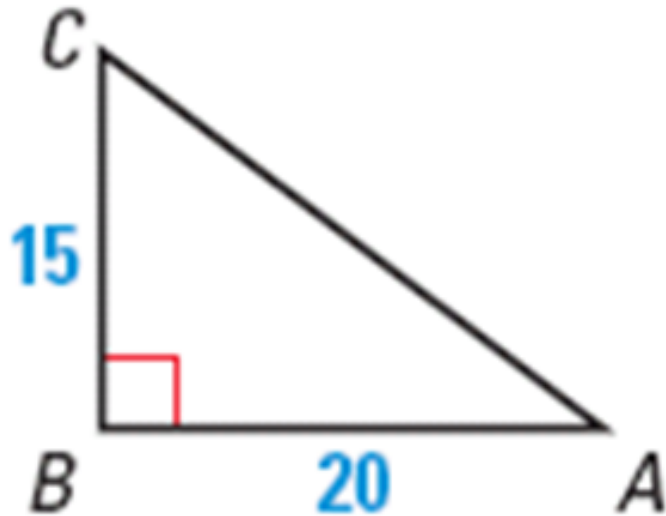
▶ If

▶ Then

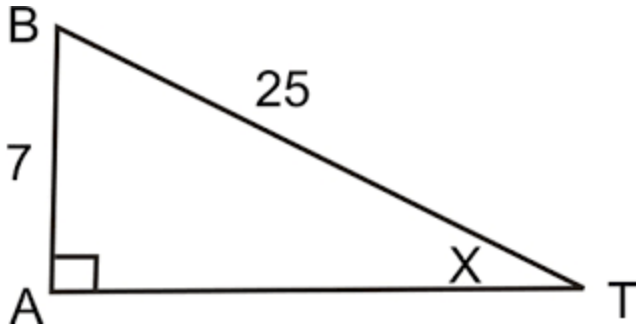
▶ EX:  $\tan\theta = 0.75$

EX:

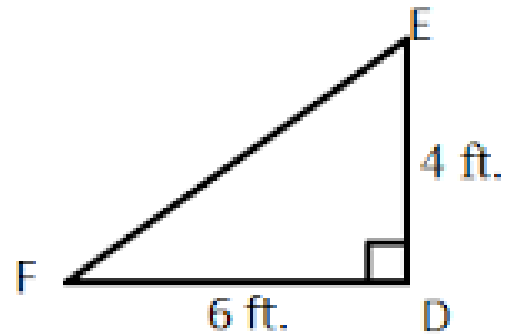
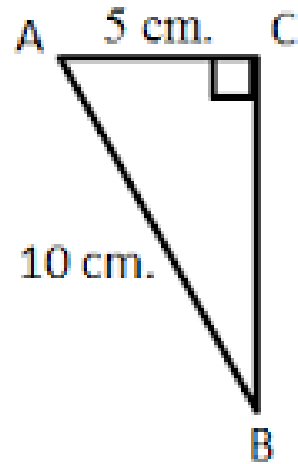
- ▶ Use a calculator to approximate the measure of  $A$  to the nearest tenth of a degree.



EX: Find the measure of angle  $x$ .



EX: Find angle A and angle E.





EX:

**EXAMPLE 4**

Solve a real-world problem

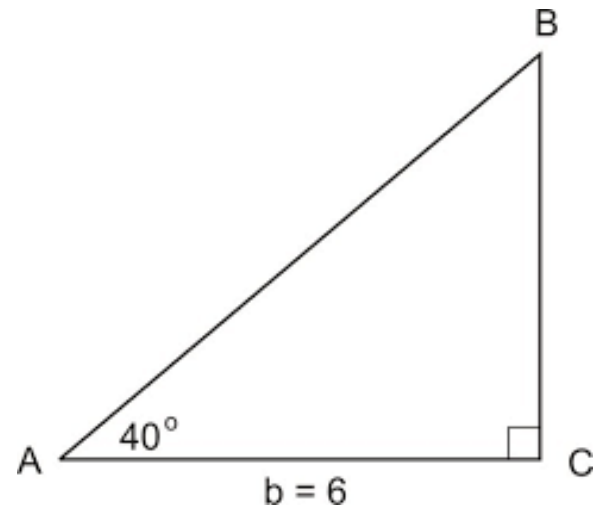
**THEATER DESIGN**

Suppose your school is building a *raked stage*. The stage will be 30 feet long from front to back, with a total rise of 2 feet. A rake (angle of elevation) of  $5^\circ$  or less is generally preferred for the safety and comfort of the actors. Is the raked stage you are building within the range suggested?

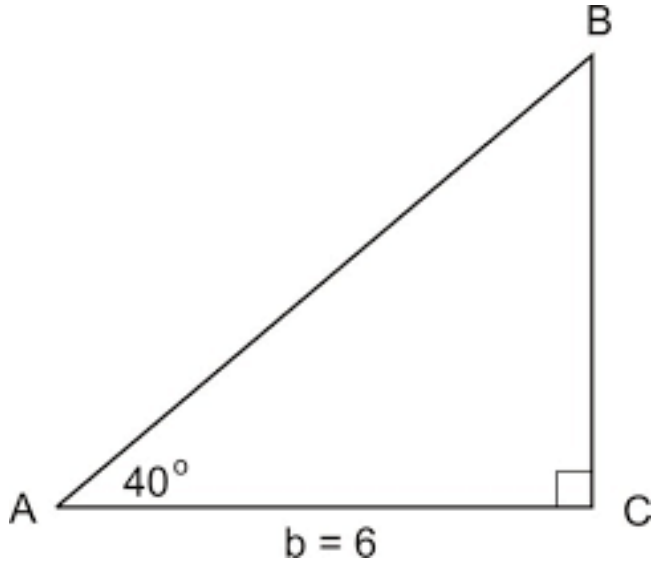


# To Solve a Right Triangle:

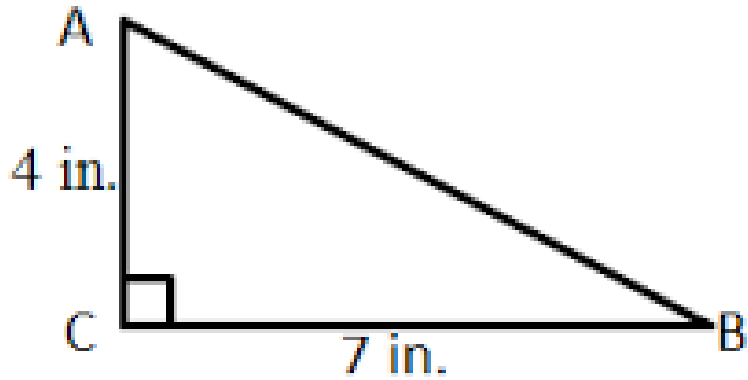
- ▶ Find the measures of \_\_\_\_\_  
\_\_\_\_\_ and \_\_\_\_\_.
- ▶ To do this you can use:



# EX: Solve the right triangle.



# EX: Solve the right triangle.



# EX: Solve the right triangle.

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