



### Section 7.5 Solving Oblique Triangles: Law of Sines

**Note:** Your answers might vary a little due to rounding errors.

- $B \approx 43^\circ$   
 $b \approx 8.4$  in.  
 $c \approx 12.3$  in.
- $C \approx 35^\circ$   
 $a \approx 25.8$  in.  
 $b \approx 17.7$  in.
- $B \approx 48.3^\circ$   
 $C \approx 19.7^\circ$   
 $b \approx 8.9$  ft
- $m\overline{AB} \approx 12.2$  m
- The distance between the two docks is 215.4 yards.
- $m\overline{AB} \approx 15.0$  in.;  $m\overline{CB} \approx 17.7$  in.
- The height of the Cypress is about 49 feet.
- The height of the spruce is about 55.7 feet.

### Section 7.6 Solving Oblique Triangles: Law of Cosines

**Note:** Your answers might vary a little due to rounding errors.

- $A \approx 45.6^\circ$   
 $B \approx 35.4^\circ$   
 $c \approx 29$  in.
- $A \approx 132.8^\circ$   
 $C \approx 15.2^\circ$   
 $b \approx 10.1$  yd
- $A \approx 70^\circ$   
 $B \approx 48.7^\circ$   
 $C \approx 61.3^\circ$
- $A \approx 29.6^\circ$   
 $B \approx 130^\circ$   
 $C \approx 20.4^\circ$
- The measure of the longest side is about 8.6 in.
- The distance between the two docks is about 108.3 yards.
- a) Civic Avenue will be about 3.7 miles long.      b)  $m\angle A$  will be about  $29.7^\circ$ .

### Section 7.7 Solving Oblique Triangles: Law of Cosines

**Note:** Your answers might vary a little due to rounding errors.

- $h \approx 2.1$ , and  $a < h$ , so there is no triangle.
- $h \approx 6.73$  and  $h < a$ . Also,  $a \geq b$ , which means  $\angle B$  is acute (because  $B < A$ ), so there is only one triangle:  $B \approx 46.4^\circ$ ;  $C \approx 72.6^\circ$ ; and  $c \approx 10.1$  m.
- $A$  is obtuse, and  $a < b$ , so there is no triangle.
- $A$  is obtuse, and  $a > b$ , so there is one triangle:  $B \approx 36.6^\circ$ ;  $C = 13.4^\circ$ ; and  $c \approx 2.7$  ft.
- $h \approx 12.40011$ , which is very close to  $a = 12.4$ ; this is close enough to say  $h = a$ , and it is safe to assume that  $B$  is a right angle:  $B = 90^\circ$ ;  $C = 58^\circ$ ; and  $c \approx 26.5$  ft.