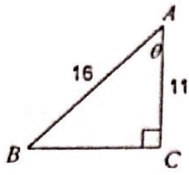


## Unit 3 Quiz Review

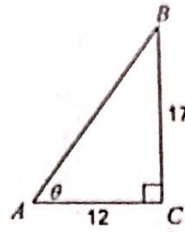
Find the measure of each angle indicated. Round to two decimal places.

1)



$$\theta = 46.57^\circ$$

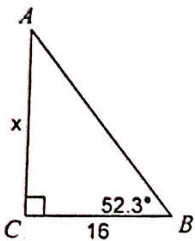
2)



$$\theta = 54.78^\circ$$

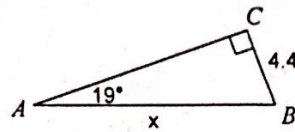
Find the measure of each side indicated. Round to two decimal places.

3)



$$x = 20.70$$

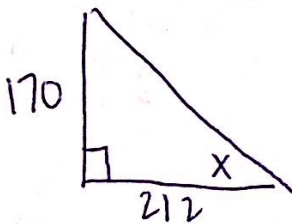
4)



$$x = 13.51$$

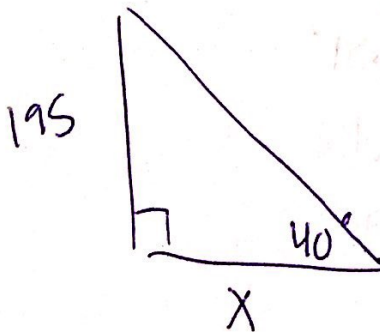
5) The Washington Monument is 170 meters tall and casts a shadow 212 meters long. What is the angle of elevation of the sun at this time?

$$x = 38.73^\circ$$



6) The angle of depression from the top of a lighthouse to a ship at sea is  $40^\circ$ . If the lighthouse is 195 feet tall, how far is the ship from the base of the lighthouse?

$$x = 232.39$$



State the number of possible triangles that can be formed using the given measurements.

7)  $m\angle B = 32^\circ$ ,  $a = 19$  mi,  $b = 14$  mi

2  $\Delta$ 's

8)  $m\angle A = 62^\circ$ ,  $a = 23$  in,  $c = 13$  in

1  $\Delta$

9)  $m\angle B = 38^\circ$ ,  $a = 32$  in,  $b = 29$  in

2  $\Delta$ 's

10)  $m\angle A = 53^\circ$ ,  $c = 27$  ft,  $a = 8$  ft

no  $\Delta$

Solve each triangle. Round your answers to the nearest tenth.

11)  $m\angle C = 117^\circ$ ,  $m\angle A = 22^\circ$ ,  $c = 38$  cm

$B = 41^\circ$

$a = 15.98$

$b = 27.98$

12)  $b = 21$  cm,  $c = 9$  cm,  $a = 27$  cm

$A = 123.2^\circ$

$B = 40.6^\circ$

$C = 16.2^\circ$

13)  $c = 24$  km,  $m\angle A = 117^\circ$ ,  $b = 27$  km

$B = 33.56^\circ$

$C = 29.44^\circ$

$a = 43.51$

14)  $m\angle B = 53^\circ$ ,  $a = 23$  cm,  $b = 19$  cm

$A_1 = 75.19^\circ$

$C_1 = 51.81^\circ$

$C_1 = 18.7$

2  $\Delta$ 's!

$A_2 = 104.81^\circ$

$C_2 = 22.19^\circ$

$C_2 = 8.99$