

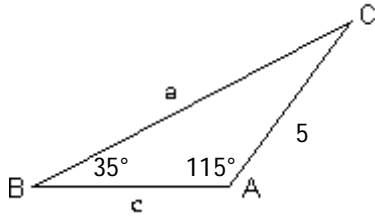
Teorema del Seno y Teorema del Coseno

MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.

Solve the triangle.

1)

1) _____

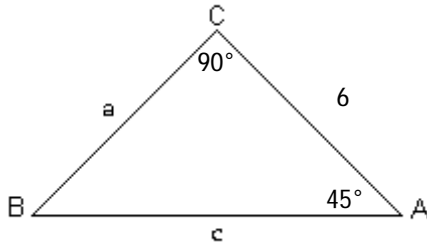


- A) $C = 30^\circ, a = 7.9, c = 4.36$
 C) $C = 25^\circ, a = 4.36, c = 7.9$

- B) $C = 30^\circ, a = 4.36, c = 7.9$
 D) $C = 35^\circ, a = 7.9, c = 4.36$

2)

2) _____



- A) $B = 40^\circ, a = 8.49, c = 6$
 C) $B = 50^\circ, a = 6, c = 8.49$

- B) $B = 45^\circ, a = 6, c = 8.49$
 D) $B = 45^\circ, a = 8.49, c = 6$

3) $A = 60^\circ, B = 100^\circ, a = 1$

3) _____

- A) $C = 20^\circ, b = 0.39, c = 0.14$
 C) $C = 20^\circ, b = 1.14, c = 0.39$

- B) $C = 20^\circ, b = 2.14, c = 0.39$
 D) $C = 20^\circ, b = 0.39, c = 1.14$

Solve the problem.

4) An airplane is sighted at the same time by two ground observers who are 3 miles apart and both directly west of the airplane. They report the angles of elevation as 11° and 23° . How high is the airplane?

4) _____

- A) 2.2 mi B) 0.57 mi C) 1.08 mi D) 1.17 mi

5) A ship sailing parallel to shore sights a lighthouse at an angle of 10° from its direction of travel. After traveling 5 miles farther, the angle is 23° . At that time, how far is the ship from the lighthouse?

5) _____

- A) 5 mi B) 8.68 mi C) 3.86 mi D) 2.22 mi

Solve the triangle.

6) $B = 20^\circ, C = 30^\circ, a = 2$

6) _____

- A) $A = 130^\circ, b = 1.31, c = 0.89$
 C) $A = 130^\circ, b = 2.31, c = 0.89$

- B) $A = 130^\circ, b = 1.89, c = 1.31$
 D) $A = 130^\circ, b = 0.89, c = 1.31$

SHORT ANSWER. Write the word or phrase that best completes each statement or answers the question.

Solve the problem.

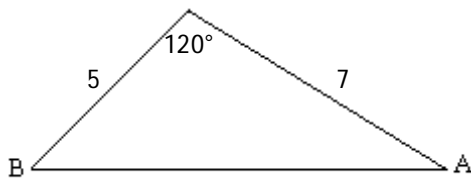
- 7) Two surveyors 180 meters apart on the same side of a river measure their respective angles to a point between them on the other side of the river and obtain 54° and 68° . How far from the point (line-of-sight distance) is each surveyor? Round your answer to the nearest 0.1 meter. 7) _____

MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.

- 8) A flagpole is perpendicular to the horizontal but is on a slope that rises 10° from the horizontal. The pole casts a 43-foot shadow down the slope and angle of elevation of the sun measured from the slope is 36° . How tall is the pole? Round your answer to the nearest 0.1 foot. 8) _____
 A) 33.5 ft B) 36.2 ft C) 35.4 ft D) 36.4 ft
- 9) It is 4.7 km from Lighthouse A to Port B. The bearing of the port from the lighthouse is $N73^\circ E$. A ship has sailed due west from the port and its bearing from the lighthouse is $N31^\circ E$. How far has the ship sailed from the port? Round your answer to the nearest 0.1 km. 9) _____
 A) 3.7 km B) 3.1 km C) 2.7 km D) 3.5 km
- 10) To find the distance AB across a river, a distance BC of 1034 m is laid off on one side of the river. It is found that $B = 104.0^\circ$ and $C = 13.9^\circ$. Find AB. Round to the nearest meter. 10) _____
 A) 284 m B) 281 m C) 248 m D) 245 m

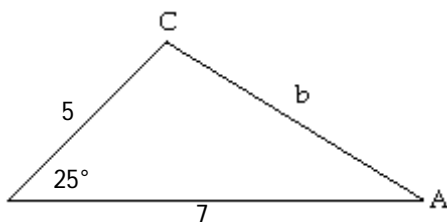
Solve the triangle.

- 11) 11) _____



- A) $c = 11.44, A = 24.5^\circ, B = 35.5^\circ$ B) $c = 10.44, A = 24.5^\circ, B = 35.5^\circ$
 C) $c = 10.44, A = 35.5^\circ, B = 24.5^\circ$ D) $c = 9.44, A = 35.5^\circ, B = 24.5^\circ$

- 12) 12) _____



- A) $b = 3.25, A = 40.6^\circ, C = 114.4^\circ$ B) $b = 4.25, A = 40.6^\circ, C = 114.4^\circ$
 C) $b = 3.25, A = 114.4^\circ, C = 40.6^\circ$ D) $b = 2.25, A = 114.4^\circ, C = 40.6^\circ$

Find the area of the triangle. If necessary, round the answer to two decimal places.

- 13) $A = 83^\circ, b = 9, c = 6$ 13) _____
 A) 53.60 B) 26.80 C) 27.01 D) 3.29
- 14) $A = 30^\circ, b = 14, c = 8$ 14) _____
 A) 50.5 B) 48.5 C) 26 D) 28

