Trigonometric Word Problems

1 In an isosceles triangle ABC, AC and CB are 15 m each. Angle A and B are both 55°. Find the length of AB to the nearest meter.

2 An aeroplane(A) is flying at above 1000ft above the ground and directly over a church(c). The angle of elevation of the plane as seen by a boy at a point A on the ground some distance from the church is 22 degrees. Find the distance of the boy from the church and from the plane

3 A man is in a boat that is floating 175 feet from the base of a 200 foot cliff. Find the angle of depression between the cliff and the boat?

4 Henry is standing on top of a cliff 305ft above a lake. The measurement of the angle of depression to a boat on the lake is 42°. How far is the boat from Henry.

5 A lamppost casts a shadow of 18 m when the angle of elevation of the Sun is 33.7 degrees. How high is the lamppost? Round your answer to the nearest meter

6 From a 200-foot observation tower on the beach, a man sights a whale in difficulty. The angle of depression of the whale is 7°. What is the distance of the whale from the shoreline?

Name : _____

Score : _____ Date : _____

M∆TH
MONKS

Trigonometric Word Problems

1 In an isosceles triangle ABC, AC and CB are 15 m each. Angle A and B are both 55°. Find the length of AB to the nearest meter.

17 m

2 An aeroplane(A) is flying at above 1000ft above the ground and directly over a church(c). The angle of elevation of the plane as seen by a boy at a point A on the ground some distance from the church is 22 degrees. Find the distance of the boy from the church and from the plane

2475 ft from the church, 2670 ft from the plane

3 A man is in a boat that is floating 175 feet from the base of a 200 foot cliff. Find the angle of depression between the cliff and the boat?

48.8 degrees

4 Henry is standing on top of a cliff 305ft above a lake. The measurement of the angle of depression to a boat on the lake is 42°. How far is the boat from Henry.

455.9 ft

5 A lamppost casts a shadow of 18 m when the angle of elevation of the Sun is 33.7 degrees. How high is the lamppost? Round your answer to the nearest meter

12 m

6 From a 200-foot observation tower on the beach, a man sights a whale in difficulty. The angle of depression of the whale is 7°. What is the distance of the whale from the shoreline?

1628.92 ft