

I. SOLVE EACH TRIANGLE. ROUND ALL ANSWERS TO ONE DECIMAL PLACE.

* * * FOR ITEMS #1 - #5 ASSUME IN EACH TRIANGLE THAT $\angle C$ IS THE RIGHT ANGLE. * * *

1. GIVEN: $\angle C = 90^\circ$ $\angle B = 62^\circ$ $c = 35m$ SOLVE THE TRIANGLE
2. GIVEN: $\angle C = 90^\circ$ $\angle A = 37^\circ$ $b = 22cm$ SOLVE THE TRIANGLE
3. GIVEN: $\angle C = 90^\circ$ $\angle B = 52^\circ$ $b = 112cm$ SOLVE THE TRIANGLE
4. GIVEN: $\angle C = 90^\circ$ $\angle A = 17^\circ$ $c = 40ft$ SOLVE THE TRIANGLE
5. GIVEN: $\angle C = 90^\circ$ $a = 47in$ $c = 86ft$ SOLVE THE TRIANGLE

II. SOLVE EACH PROBLEM. ROUND ALL ANSWERS TO TWO DECIMAL PLACES.

6. THE DISTANCE BETWEEN A DOG AND A CAT IS 44 FT. A BIRD IS DIRECTLY ABOVE THE DOG AND THE CAT'S ANGLE OF ELEVATION TO THE BIRD IS 33° . HOW HIGH ABOVE THE DOG IS THE BIRD?

7. A COWBOY IS ON A CLIFF ABOVE THE CANYON FLOOR AND A HORSE IS 75 FEET FROM THE BASE OF THE CLIFF. IF THE COWBOY HAS AN ANGLE OF DEPRESSION OF 22° TO THE HORSE, HOW HIGH IS THE CLIFF?

8. A HELICOPTER IS HOVERING ABOVE A DOLPHIN IN THE OCEAN AND A CERTAIN DISTANCE FROM THE DOLPHIN IS A WHALE. SUPPOSE THE HELICOPTER'S ANGLE OF DEPRESSION TO THE WHALE IS 17° AND THE DIAGONAL DISTANCE BETWEEN THE HELICOPTER AND THE WHALE IS 132 METERS.

A) FIND THE HEIGHT OF THE HELICOPTER ABOVE THE DOLPHIN.

B) FIND THE DISTANCE BETWEEN THE DOLPHIN AND THE WHALE.

9. KELLY IS 57 FEET FROM A TV TOWER; THE TV TOWER IS 245 FEET HIGH. WHAT IS KELLY'S ANGLE OF ELEVATION TO THE TOP OF THE TOWER?

10. A ROWBOAT AND A CANOE ARE ON THE SURFACE OF THE OCEAN AND A SUBMARINE IS 32 METERS DIRECTLY BELOW THE ROWBOAT. IF THE CANOE'S ANGLE OF DEPRESSION TO THE SUBMARINE IS 24° . HOW FAR APART ARE THE ROWBOAT AND THE CANOE?