NAME:_____

1. To find the height of a pole, a surveyor moves 80 feet away from the base of the pole and then, with a transit 4 feet tall, measures the angle of elevation to the top of the pole to be 57° . What is the height of the pole? Round answer to the nearest foot.

   [A] 52 ft   [B] 56 ft

   [C] 127 ft   [D] 123 ft

2. To find the height of a pole, a surveyor moves 100 feet away from the base of the pole and then, with a transit 3 feet tall, measures the angle of elevation to the top of the pole to be 28° . What is the height of the pole? Round answer to the nearest foot.

   [A] 188 ft   [B] 56 ft

   [C] 191 ft   [D] 53 ft

3. To find the height of a pole, a surveyor moves 60 feet away from the base of the pole and then, with a transit 6 feet tall, measures the angle of elevation to the top of the pole to be 44° . What is the height of the pole? Round answer to the nearest foot.

   [A] 68 ft   [B] 64 ft   [C] 62 ft   [D] 58 ft

4. To find the height of a pole, a surveyor moves 190 feet away from the base of the pole and then, with a transit 4 feet tall, measures the angle of elevation to the top of the pole to be 60° . What is the height of the pole? Round answer to the nearest foot.

   [A] 110 ft   [B] 329 ft

   [C] 333 ft   [D] 114 ft

5. An airplane over the Pacific sights an atoll at a 5° angle of depression. If the plane is 405 m above water, how many kilometers is it from a point 405 m above the atoll?

6. An airplane over the Pacific sights an atoll at a 11° angle of depression. If the plane is 500 m above water, how many kilometers is it from a point 500 m above the atoll?

7. An airplane over the Pacific sights an atoll at a 17° angle of depression. If the plane is 445 m above water, how many kilometers is it from a point 445 m above the atoll?

8. A lookout spots a fire from a 32 meter tower. The angle of depression from the tower to the fire is 13 degrees. To the nearest meter, how far is the fire from the base of the tower?

9. A lookout spots a fire from a 20 meter tower. The angle of depression from the tower to the fire is 14 degrees. To the nearest meter, how far is the fire from the base of the tower?

10. A lookout spots a fire from a 36 meter tower. The angle of depression from the tower to the fire is 22 degrees. To the nearest meter, how far is the fire from the base of the tower?

[1] <u>C</u>

[2] <u>B</u>

[3] <u>B</u>

[4] <u>C</u>

[5] <u>4.63 km</u>

[6] <u>2.57 km</u>

[7] <u>1.46 km</u>

[8] <u>139 meters</u>

[9] <u>80 meters</u>

[10] <u>89 meters</u>