Lesson 8.1 Practice: Angles of Elevation and Depression

School Launch · Trigonometry · Unit 8: Applications · Worksheet A

Scientific calculator

Name _____ Date _____ Score _____ / 10

Show your work under each problem, one step per line, and check your answer. Word problems: name the unknown, write the equation, solve, and answer in a sentence with units.

1. From 316 ft away, the angle of elevation to the top of a tower is $32°$. How tall is the tower (nearest tenth)? EASY

2. From 151 ft away, the angle of elevation to the top of a tower is $49°$. How tall is the tower (nearest tenth)? EASY

3. From 260 ft away, the angle of elevation to the top of a tower is $56°$. How tall is the tower (nearest tenth)? EASY

4. From 142 ft away, the angle of elevation to the top of a tower is $30°$, measured from eye level 6 ft above the ground. How tall is the tower (nearest tenth)? MEDIUM

5. From 355 ft away, the angle of elevation to the top of a tower is $30°$, measured from eye level 4 ft above the ground. How tall is the tower (nearest tenth)? MEDIUM

6. From 338 ft away, the angle of elevation to the top of a tower is $56°$, measured from eye level 4 ft above the ground. How tall is the tower (nearest tenth)? MEDIUM

7. From 285 ft away, the angle of elevation to the top of a tower is $34°$, measured from eye level 6 ft above the ground. How tall is the tower (nearest tenth)? MEDIUM

8. From 373 ft away, the angle of elevation to the top of a tower is $19°$, measured from eye level 4 ft above the ground. How tall is the tower (nearest tenth)? HARD

9. From 395 ft away, the angle of elevation to the top of a tower is $25°$, measured from eye level 6 ft above the ground. How tall is the tower (nearest tenth)? HARD

10. From 132 ft away, the angle of elevation to the top of a tower is $68°$, measured from eye level 4 ft above the ground. How tall is the tower (nearest tenth)? HARD