Lesson 8.3 Practice: Surveying and Triangulation

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. Surveyors at points A and B, 584 m apart, sight a tree T across a river. $\angle A = 49°$ and $\angle B = 70°$. Find AT (nearest meter). EASY

2. Surveyors at points A and B, 551 m apart, sight a tree T across a river. $\angle A = 48°$ and $\angle B = 42°$. Find AT (nearest meter). EASY

3. Surveyors at points A and B, 285 m apart, sight a tree T across a river. $\angle A = 69°$ and $\angle B = 42°$. Find AT (nearest meter). EASY

4. Surveyors at points A and B, 243 m apart, sight a tree T across a river. $\angle A = 51°$ and $\angle B = 44°$. Find AT (nearest meter). MEDIUM

5. Surveyors at points A and B, 886 m apart, sight a tree T across a river. $\angle A = 50°$ and $\angle B = 31°$. Find AT (nearest meter). MEDIUM

6. Surveyors at points A and B, 861 m apart, sight a tree T across a river. $\angle A = 56°$ and $\angle B = 67°$. Find AT (nearest meter). MEDIUM

7. Surveyors at points A and B, 318 m apart, sight a tree T across a river. $\angle A = 63°$ and $\angle B = 41°$. Find AT (nearest meter). MEDIUM

8. Surveyors at points A and B, 323 m apart, sight a tree T across a river. $\angle A = 46°$ and $\angle B = 45°$. Find AT (nearest meter). HARD

9. Surveyors at points A and B, 214 m apart, sight a tree T across a river. $\angle A = 34°$ and $\angle B = 49°$. Find AT (nearest meter). HARD

10. Surveyors at points A and B, 359 m apart, sight a tree T across a river. $\angle A = 38°$ and $\angle B = 40°$. Find AT (nearest meter). HARD