Lesson 5.5 Practice: Indirect Proof and Inequalities in One Triangle

School Launch · Geometry · Unit 5: Relationships Within Triangles · Worksheet A

Calculator allowed

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. Can 20, 13 and 6 be the side lengths of a triangle? EASY

2. Can 12, 9 and 24 be the side lengths of a triangle? EASY

3. Can 13, 6 and 11 be the side lengths of a triangle? EASY

4. Two sides of a triangle are 13 and 12. Write the range of possible lengths for the third side. MEDIUM

5. Two sides of a triangle are 7 and 20. Write the range of possible lengths for the third side. MEDIUM

6. Two sides of a triangle are 3 and 7. Write the range of possible lengths for the third side. MEDIUM

7. Two sides of a triangle are 13 and 14. Write the range of possible lengths for the third side. MEDIUM

8. In $\triangle ABC$, $m\angle A = 38°$ and $m\angle B = 77°$. List the sides from shortest to longest. HARD

9. In $\triangle ABC$, $m\angle A = 42°$ and $m\angle B = 45°$. List the sides from shortest to longest. HARD

10. In $\triangle ABC$, $m\angle A = 35°$ and $m\angle B = 62°$. List the sides from shortest to longest. HARD