Lesson 5.6 Practice: The Triangle Inequality and the Hinge Theorem

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 10, 10 and 18 be the side lengths of a triangle? EASY

2. Can 4, 3 and 1 be the side lengths of a triangle? EASY

3. Can 7, 6 and 24 be the side lengths of a triangle? EASY

4. Two sides of a triangle are 8 and 7. Write the range of possible lengths for the third side. MEDIUM

5. Two sides of a triangle are 20 and 15. Write the range of possible lengths for the third side. MEDIUM

6. Two sides of a triangle are 5 and 10. Write the range of possible lengths for the third side. MEDIUM

7. Two sides of a triangle are 13 and 20. Write the range of possible lengths for the third side. MEDIUM

8. In $\triangle ABC$, $m\angle A = 44°$ and $m\angle B = 54°$. List the sides from shortest to longest. HARD

9. In $\triangle ABC$, $m\angle A = 93°$ and $m\angle B = 39°$. List the sides from shortest to longest. HARD

10. In $\triangle ABC$, $m\angle A = 41°$ and $m\angle B = 66°$. List the sides from shortest to longest. HARD