Lesson 4.5 Practice: Using Congruent Triangles (CPCTC)

School Launch · Geometry · Unit 4: Triangles and Congruence · 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. $\triangle ABC \cong \triangle DEF$. $AB = 3x - 4$ and $DE = 2x + 7$. Find x and AB. EASY

2. $\triangle ABC \cong \triangle DEF$. $AB = 3x + 6$ and $DE = 4x - 3$. Find x and AB. EASY

3. $\triangle ABC \cong \triangle DEF$. $AB = 5x - 6$ and $DE = 2x + 9$. Find x and AB. EASY

4. $\triangle ABC \cong \triangle DEF$. $AB = 2x - 6$ and $DE = 5x - 39$. Find x and AB. MEDIUM

5. $\triangle ABC \cong \triangle DEF$. $AB = 5x + 7$ and $DE = 2x + 22$. Find x and AB. MEDIUM

6. $\triangle ABC \cong \triangle DEF$. $AB = 2x + 4$ and $DE = 4x - 16$. Find x and AB. MEDIUM

7. $\triangle ABC \cong \triangle DEF$. $AB = 4x - 1$ and $DE = 2x + 15$. Find x and AB. MEDIUM

8. $\triangle ABC \cong \triangle DEF$. $AB = 4x - 2$ and $DE = 5x - 14$. Find x and AB. HARD

9. $\triangle ABC \cong \triangle DEF$. $AB = 3x + 2$ and $DE = 5x - 16$. Find x and AB. HARD

10. $\triangle ABC \cong \triangle DEF$. $AB = 4x + 7$ and $DE = 5x + 4$. Find x and AB. HARD