Lesson 3.3 Practice: Proving Lines Parallel

School Launch · Geometry · Unit 3: Parallel and Perpendicular Lines · 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. Alternate interior angles measure $(2x + 8)^\circ$ and $(3x - 4)^\circ$. For what value of x are the lines parallel? Name the theorem. EASY

2. Alternate interior angles measure $(4x + 8)^\circ$ and $(5x - 9)^\circ$. For what value of x are the lines parallel? Name the theorem. EASY

3. Alternate interior angles measure $(6x + 9)^\circ$ and $(5x + 27)^\circ$. For what value of x are the lines parallel? Name the theorem. EASY

4. Alternate interior angles measure $(4x + 8)^\circ$ and $(1x + 53)^\circ$. For what value of x are the lines parallel? Name the theorem. MEDIUM

5. Alternate interior angles measure $(4x - 5)^\circ$ and $(5x - 25)^\circ$. For what value of x are the lines parallel? Name the theorem. MEDIUM

6. Alternate interior angles measure $(4x + 13)^\circ$ and $(3x + 23)^\circ$. For what value of x are the lines parallel? Name the theorem. MEDIUM

7. Alternate interior angles measure $(3x + 4)^\circ$ and $(6x - 23)^\circ$. For what value of x are the lines parallel? Name the theorem. MEDIUM

8. Alternate interior angles measure $(6x + 10)^\circ$ and $(3x + 25)^\circ$. For what value of x are the lines parallel? Name the theorem. HARD

9. Alternate interior angles measure $(6x - 1)^\circ$ and $(4x + 25)^\circ$. For what value of x are the lines parallel? Name the theorem. HARD

10. Alternate interior angles measure $(4x + 7)^\circ$ and $(3x + 19)^\circ$. For what value of x are the lines parallel? Name the theorem. HARD