8-6 Practice

Trapezoids

COORDINATE GEOMETRY *RSTU* is a quadrilateral with vertices $R(-3, -3)$, $S(5, 1)$, $T(10, -2)$, $U(-4, -9)$.

1. Verify that *RSTU* is a trapezoid.

$\overline{RS} \parallel \overline{TU}$

2. Determine whether *RSTU* is an isosceles trapezoid. Explain.

not isosceles; $\overline{RU} = \sqrt{37}$ and $ST = \sqrt{34}$

COORDINATE GEOMETRY *BGHJ* is a quadrilateral with vertices $B(-9, 1)$, $G(2, 3)$, $H(12, -2)$, $J(-10, -6)$.

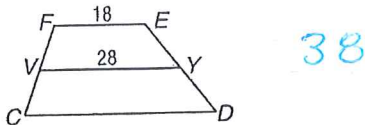**3.** Verify that *BGHJ* is a trapezoid.

$\overline{BG} \parallel \overline{HJ}$

4. Determine whether *BGHJ* is an isosceles trapezoid. Explain.

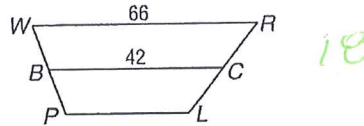not isosceles; $\overline{BJ} = \sqrt{50}$ or $5\sqrt{2}$ and $GH = \sqrt{125}$ or $5\sqrt{5}$

ALGEBRA Find the missing measure(s) for the given trapezoid.

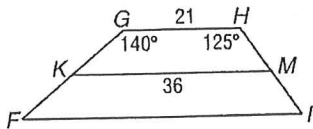**5.** For trapezoid *CDEF*, *V* and *Y* are midpoints of the legs. Find *CD*.
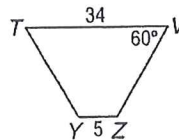
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6. For trapezoid *WRLP*, *B* and *C* are midpoints of the legs. Find *LP*.

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7. For trapezoid *FGHI*, *K* and *M* are midpoints of the legs. Find *FI*, $m\angle F$, and $m\angle I$. 51, 40, 55

8. For isosceles trapezoid *TVZY*, find the length of the median, $m\angle T$, and $m\angle Z$.

19.5, 60, 120

9. CONSTRUCTION A set of stairs leading to the entrance of a building is designed in the shape of an isosceles trapezoid with the longer base at the bottom of the stairs and the shorter base at the top. If the bottom of the stairs is 21 feet wide and the top is 14 feet wide, find the width of the stairs halfway to the top. 17.5

10. DESK TOPS A carpenter needs to replace several trapezoid-shaped desktops in a classroom. The carpenter knows the lengths of both bases of the desktop. What other measurements, if any, does the carpenter need?

The measures of the base angles