Name_____ Date_____

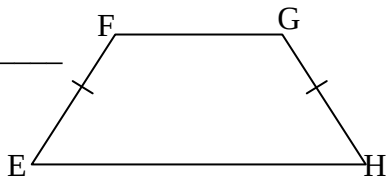
6.3 – Discovering Kite and Trapezoid Properties

Complete the following.

1) If $m\angle E = m\angle H$ and $m\angle F = 123°$. then $m\angle E =$ _____, $m\angle G =$ _____

2) If $m\angle E = m\angle H$ and $m\angle H = x°$, then $m\angle G =$ _____, $m\angle F =$ _____

3) If $\overline{EF} \cong \overline{HG}$, then $m\angle F$ _____ $m\angle H$



Decide if the following are true or false.

4) A trapezoid has two bases.

5) A trapezoid may have a right angle.

6) There exists a trapezoid with three congruent sides.

7) The bases of an isosceles trapezoid are congruent.

8) The parallel sides of a trapezoid are called the legs.

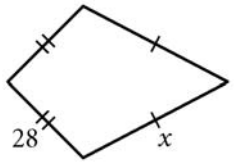
Points A, B, C and D are the vertices of a quadrilateral. Determine whether ABCD is a trapezoid. **Show work.**

9) A(0, 4), B(4, 4), C(8, -2), D(2,1)

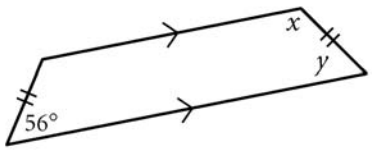
10) A(-5, 0), B(2, 3), C(3, 1), D(-2, -2)

Find each lettered measure.

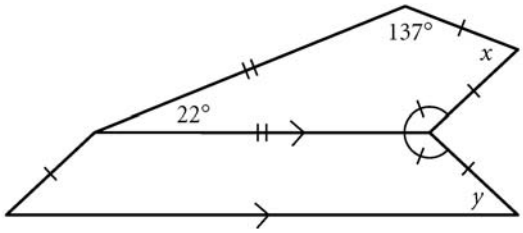
11) Perimeter = 116, x = _____



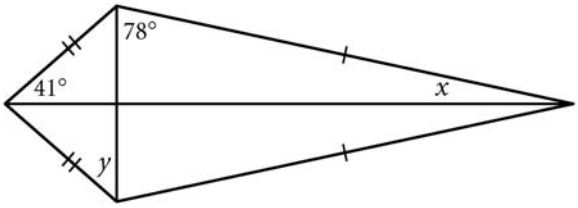
12) x = _____, y = _____



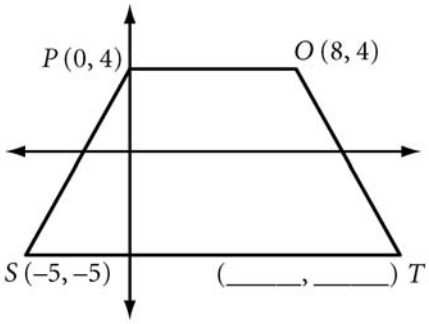
13) x = _____, y = _____



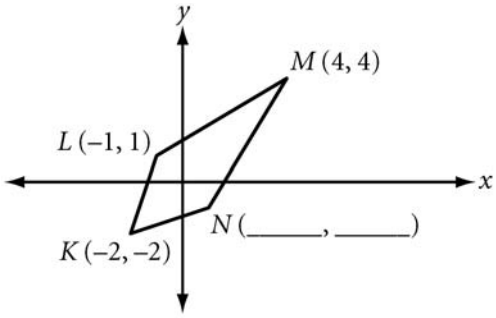
14) x = _____, y = _____



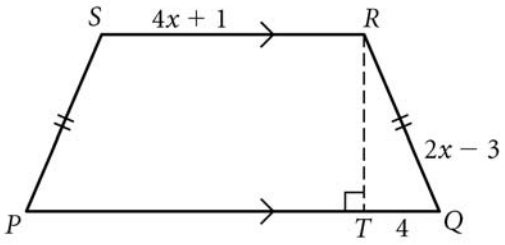
15) *STOP* is an isosceles trapezoid.
What are the coordinates of *T?*



16) *KLMN* is a kite.
What are the coordinates of *N?*



17) Perimeter *PQRS* = 220. *PS* = _____



18) $b = 2a + 1$, $a >$ _____