Name: _____

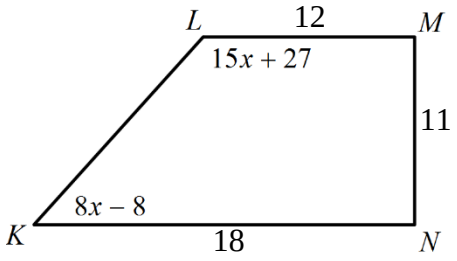
10.3D2 • Trapezoids

Past due on: _____ Period: _____

1. Use the property: *Base angles of an isosceles trapezoid are congruent* to complete the proof on page 778 of your text.

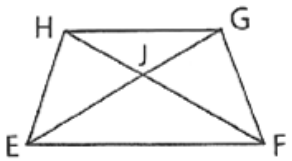
Statements	Reasons

2. *KLMN* is a trapezoid.
   a. Find *x*.
   b. Find $m\angle K$ and $m\angle L$
   c. Find the area of *KLMN.*
   d. Use the Pythagorean Theorem to determine the length of LK. What is the perimeter of $KLMN$.

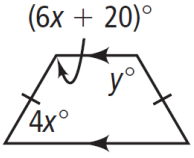


3. *EFGH* is an isosceles trapezoid
   a. Find *x.*
   b. Find *EJ, JG,* & *HJ.*

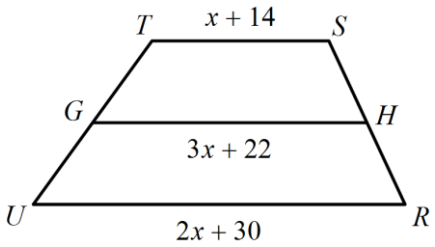
$EJ = x + 5$
$JG = 2x - 1$
$HF = 13$



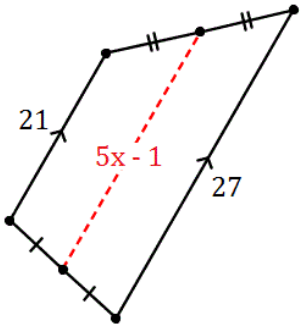
4. Find the value of x & y of the isosceles trapezoid:



5. Given trapezoid *RSTU*, find…
   a. The value of *x*.
   b. The length of the midsegment.

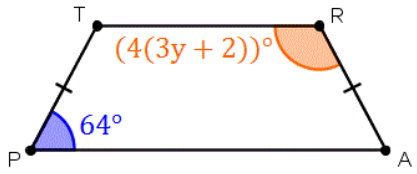


6. Find the value of *x* in the trapezoid shown:

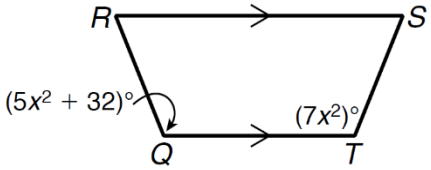


Problems 7 & 8: The trapezoids shown are isosceles trapezoids. Set up and solve an equation to value the value of the variable.

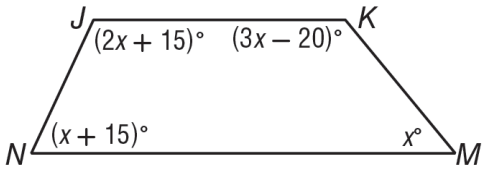
7.



8.



9. The sum of the interior angles of a quadrilateral is 360°. Is *JKMN* a trapezoid? Explain why or why not?



10. Sylvia drew what she thought was an isosceles trapezoid. She measured the base angles and determined that they measured 81°, 79°, 101°, and 99°. Could her drawing be an isosceles trapezoid? Explain your reasoning.