Name: _____ Date: _____

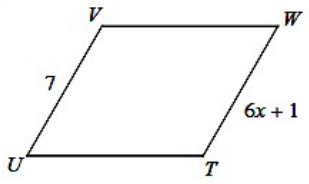
Introduction to Quadrilaterals NOTES - #1

A **parallelogram** is a quadrilateral (4 sides) whose opposite sides are **parallel**.

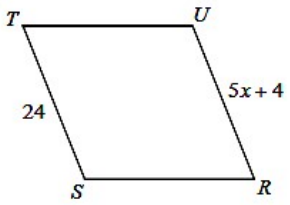
Property 1: Opposite sides of parallelograms are congruent.

Use this property to solve for x in each example. (Congruent means the same…what do we do when things are the same?)

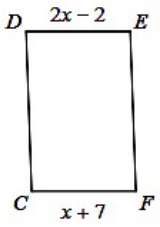
1)



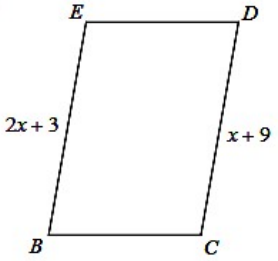
2)



3)



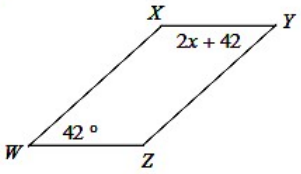
4)



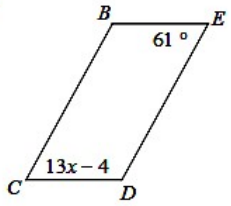
Property 2: Opposite angles are congruent.

Use this property to solve for x in each example.

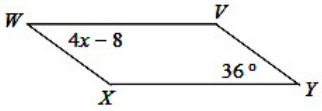
1)



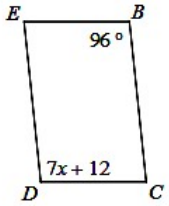
2)



3)



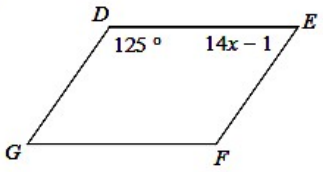
4)



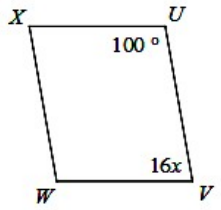
<u>Property 3:</u> Consecutive angles (the angles next to each other) are supplementary.
(angle + angle = 180)

Use this property to solve for x in each example.

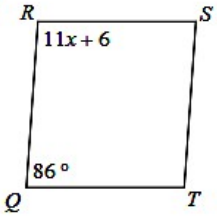
1)



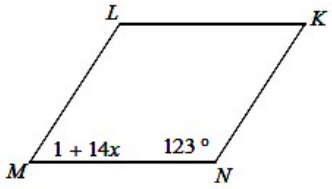
2)



3)

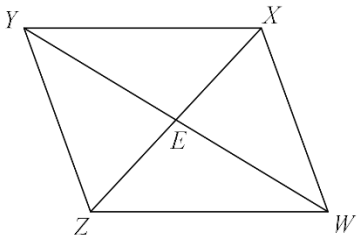


4)



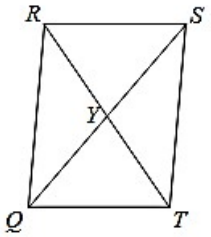
<u>Property 4:</u>
Diagonals (the lines that connect opposite angles) bisect each other (cut in half!).

Example:
$YE = 6$
$EW = 2x - 2$



Use the property to solve for x in each example:

1) $YT = 19$
$RT = 3x + 8$



2) $MR = x - 5$
$RK = 2x - 17$