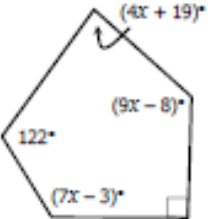
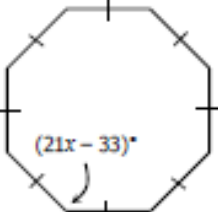


Name: \_\_\_\_\_

## Geometry Review: Packet #5

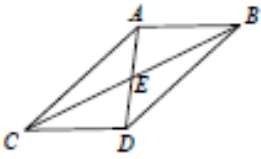
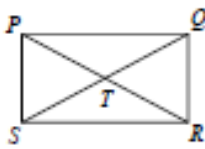
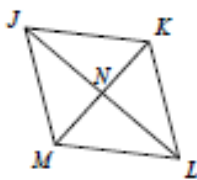
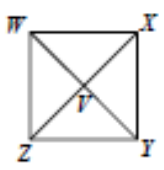


## Topic #1: Angles of Polygons

<b>ALL POLYGONS</b>	Sum of Interior Angles: _____; Sum of Exterior Angles: _____	
<b>REGULAR POLYGONS</b>	Each Interior Angle: _____; Each Exterior Angle: _____	
1. Find the sum of the interior angles of a 25-sided polygon.	2. If the sum of the measures of the interior angles of a polygon is $1,620^\circ$ , how many sides does it have?	
3. What is the measure of each interior angle of a regular 15-gon?	4. What is the measure of each exterior angle of a regular hexagon?	
5. If an interior angle of a regular polygon measures $140^\circ$ , how many sides does it have?	6. If an exterior angle of a regular polygon measures $15^\circ$ , how many sides does it have?	
7. Find the value of $x$ . 	8. Find the value of $x$ . 	

## Topic #2: Quadrilaterals

Place an "X" for each property that is true

	Parallelogram	Rectangle	Rhombus	Square
Opposite sides are parallel.				
Opposite sides are congruent.				
Diagonals bisect each other.				
Opposite angles are congruent.				
Consecutive angles are supplementary.				
Diagonals are congruent.				
Diagonals are perpendicular.				
Diagonals bisect opposite angles.				

<p>Use parallelogram <math>ABCD</math> for 9 and 10.</p> 	<p>9. If <math>CE = 6x - 1</math> and <math>EB = 2x + 11</math>, find <math>CB</math>.</p>	<p>10. If <math>m\angle ACD = (7x - 12)^\circ</math> and <math>m\angle BDC = (10x + 5)^\circ</math>, find <math>x</math>.</p>
<p>Use rectangle <math>PQRS</math> for 11 and 12.</p> 	<p>11. If <math>PR = 3x + 5</math> and <math>SQ = 5x - 9</math>, find <math>TR</math>.</p>	<p>12. If <math>m\angle PSQ = (6x - 13)^\circ</math> and <math>m\angle PQS = (x + 5)^\circ</math>, find <math>m\angle PQS</math>.</p>
<p>Use rhombus <math>JKLM</math> for 13 and 14.</p> 	<p>13. If <math>NK = 7</math> and <math>KL = 15</math>, find <math>NL</math>.</p>	<p>14. If <math>m\angle JMK = (8x - 13)^\circ</math> and <math>m\angle LMK = (4x + 19)^\circ</math>, find <math>x</math>.</p>
<p>Use square <math>WXYZ</math> for 15 and 16.</p> 	<p>15. If <math>ZV = 20</math>, find <math>WV</math>.</p>	<p>16. If <math>m\angle WVX = (13x - 7)^\circ</math>, find <math>x</math>.</p>
<p>Trapezoids have only _____ set of parallel lines.</p> <ul style="list-style-type: none"> <li>The parallel sides are called _____.</li> <li>The non-parallel sides are called _____.</li> </ul> <p><b>Properties of Isosceles Trapezoids:</b></p> <ul style="list-style-type: none"> <li>Legs are _____.</li> <li>Diagonals are _____.</li> <li>Base angles are _____.</li> <li>Opposite angles are _____.</li> </ul>		 

The **midsegment of a trapezoid**, joins the midpoints of the legs and is parallel to the bases. Its length is equal to the average of the lengths of the bases.

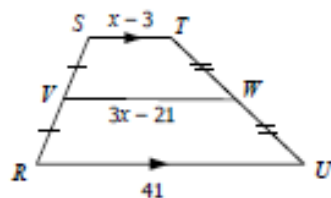
Use isosceles trapezoid  $CDEF$  for 17 and 18.



17. If  $CE = 9x - 22$  and  $FD = 4x + 3$ , find  $CE$ .

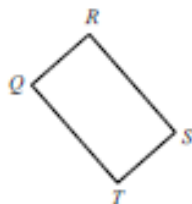
18. If  $m\angle FCD = (8x - 1)^\circ$  and  $m\angle EDC = (3x + 39)^\circ$ , find  $m\angle DEF$ .

19. Find  $VT$ .

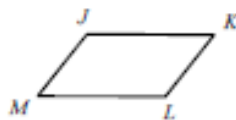


Topic #3: Quadrilaterals in the Coordinate Plane

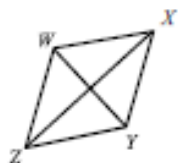
20. On rectangle  $QRST$  below, if  $Q$  is located at  $(-6, -1)$  and  $S$  is located at  $(1, -5)$ , find  $RT$ .



21. The diagonals of parallelogram  $JKLM$  below intersect at point  $(2, 5)$ . If  $K$  is located at  $(8, 7)$ , what are the coordinates of point  $M$ ?



22. On rhombus  $WXYZ$  below, if  $Z$  is located at  $(-7, 3)$  and  $X$  is located at  $(-2, 8)$ , find the slope of  $WY$ .



23. On square  $BCDE$  below, if  $E$  is located at  $(4, -9)$  and  $D$  is located at  $(10, -5)$ , find the perimeter of the square.

