Geometry Review Ch. 6
Ch. 6 test is Wed.

Project (group) due today
Reflection (individual) due Wed.

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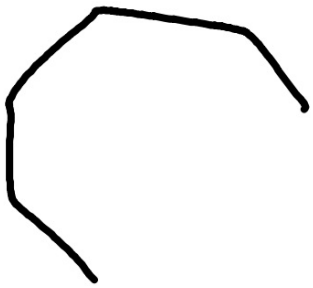
Example 1

Find the sum of the measures of the interior angales of a ~~convex~~ 22-gon.

$20 \cdot 180$

regular

$= 3600$



$\frac{3600}{22} = 163.6$

Example 2

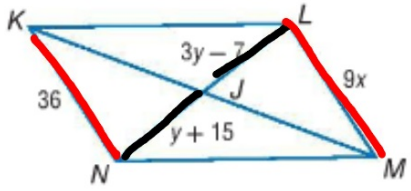
The measure of an interior angle of a regular polygon is 157.5. Find the number of sides in the polygon.

16

$$\frac{22.5n}{22.5} = \frac{360}{22.5}$$

Example 3

ALGEBRA If *KLMN* is a parallelogram, find the value of the indicated variable.



$y = 11$

$3y - 7 = y + 15$

$-y \quad +7 \quad -y \quad +7$

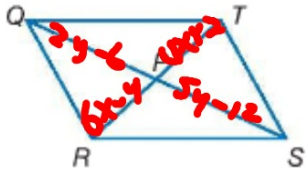
$2y = 22$

$\frac{9x}{9} = \frac{36}{9}$

$x = 4$

Example 4

If $TP = 4x + 2$, $QP = 2y - 6$, $PS = 5y - 12$, and $PR = 6x - 4$, find x and y so that the quadrilateral is a parallelogram.

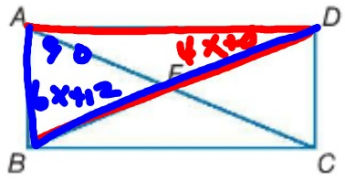


$6x - 4 = 4x + 2$

$2y - 6 = 5y - 12$

Example 5

ALGEBRA Quadrilateral $ABCD$ is a rectangle. If $m\angle ADB = 4x + 8$ and $m\angle DBA = 6x + 12$, find x.



$90 + 6x + 12 + 4x + 8 = 180$

Example 6

The diagonals of rhombus *QRST* intersect at *P*. Use the information to find each measure or value.

a. **ALGEBRA** If QT = x + 7 and TS = 2x − 9, find x.

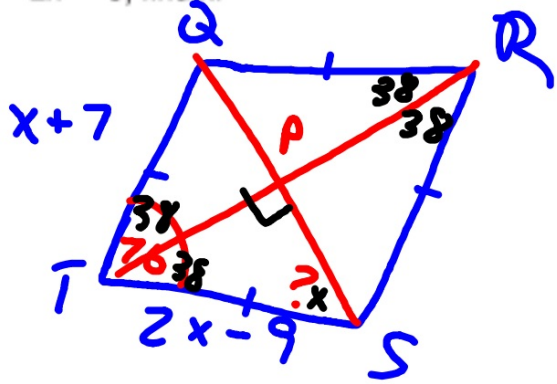
$2x-9=x+7$

b. If $m\angle QTS = 76$, find $m\angle TSP$.

$90+38+x=180$

$128+x=180$

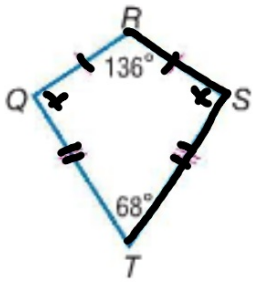
$x=52$



Example 7

If *QRST* is a kite, find $m\angle RST$.

Since $\angle Q \cong \angle S$, $m\angle Q = m\angle S$. Write and solve an equation to find $m\angle S$.

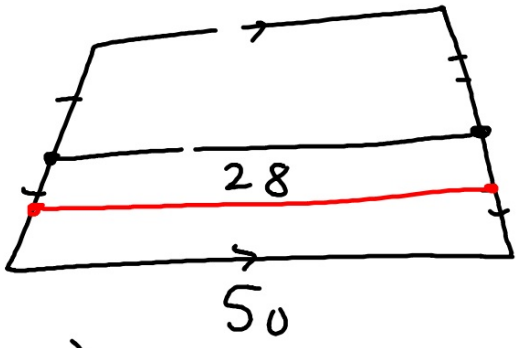


$136 + 68 + 2x = 360$

$204 + 2x = 360$

$2x = 156$

$x = 78$



$\frac{(x+50)}{2} = 28$

$\frac{1}{2}x + 25 = 28$
$-25 \quad -25$

$\frac{1}{2}x = 3$

$x = 6$

SGR
12-42e

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