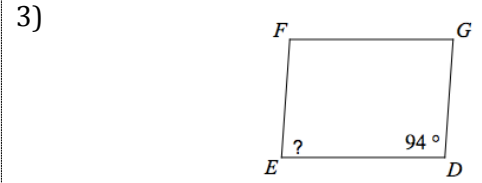
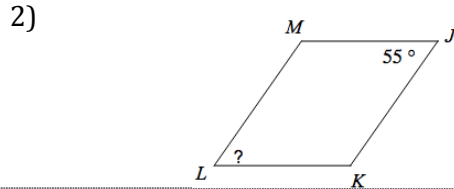
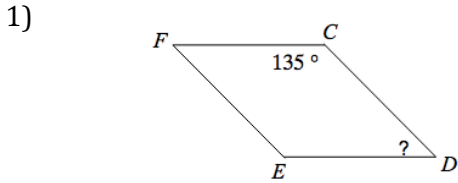


**Target 1: Use properties of parallelograms to solve problems**

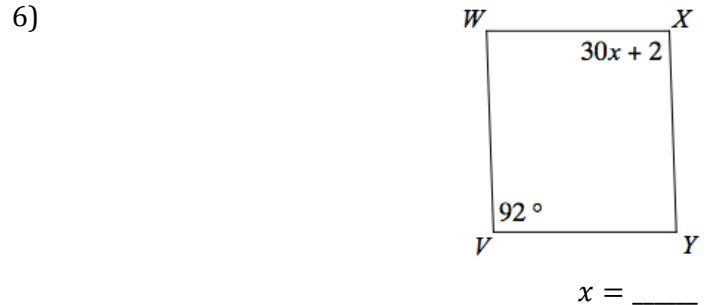
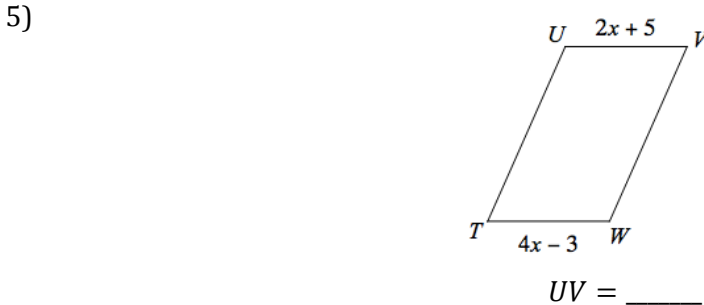
Directions: The following shapes are parallelograms. Find the indicated measurement in each parallelogram.



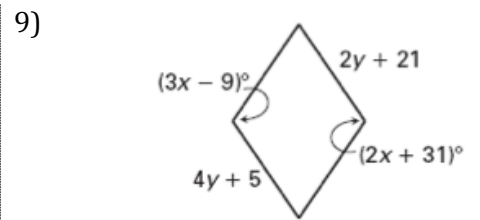
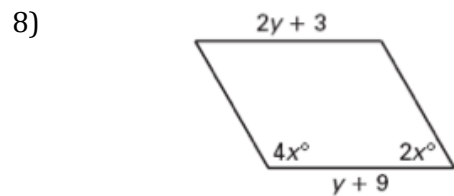
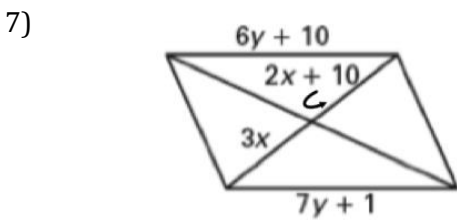
4) Check all of the properties that apply to all parallelograms.

- (A) Opposite sides are congruent
- (B) Diagonals are congruent
- (C) The diagonals of a parallelogram bisect each other
- (D) Diagonals are perpendicular
- (E) Opposite sides are parallel
- (F) Opposite sides are perpendicular
- (G) Opposite angles are complementary
- (H) Opposite angles are supplementary

Directions: Find the measure of the indicated length.

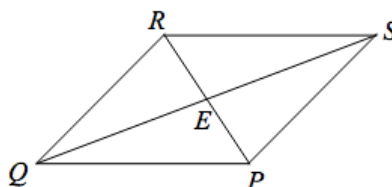


Directions: Solve for the given variables. Then find their sum.



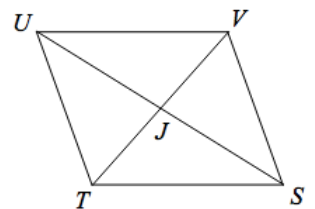
$x = \underline{\quad} \quad y = \underline{\quad} \quad SUM = \underline{\quad}$        $x = \underline{\quad} \quad y = \underline{\quad} \quad SUM = \underline{\quad}$        $x = \underline{\quad} \quad y = \underline{\quad} \quad SUM = \underline{\quad}$

10)  $QE = 2x + 26$   
 $QS = 42 + 2x$   
 $RE = x + 16$



$RP = \underline{\quad}$

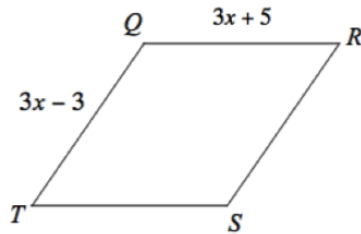
11)  $\angle TSU = (8x + 6)^\circ$ ,  
 $\angle VUS = (10x + 2)^\circ$   
 $\angle TSV = (16x + 12)^\circ$



$m\angle UVS = \underline{\quad}$

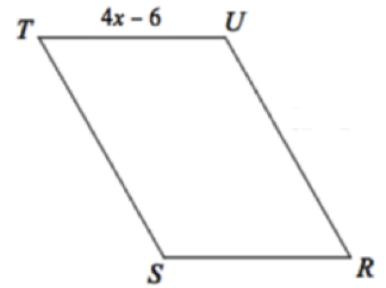
Directions: Given the perimeter find the indicated side length of the parallelogram.

12)  $P = 11x + 9$



$RP = \underline{\hspace{2cm}}$

13)  $P = 16x + 82$



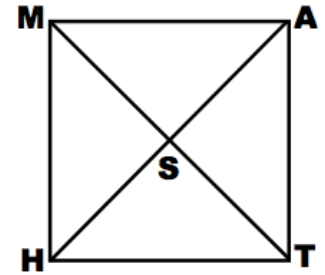
$TS(\text{In terms of } x) = \underline{\hspace{2cm}}$

Target 2: Use properties of rhombuses, rectangles, and squares to solve problems

14) Use the given information to answer the following questions: MATH is a square and  $HT = 11$

a)  $m\angle MSA = \underline{\hspace{2cm}}$

b)  $m\angle STH = \underline{\hspace{2cm}}$



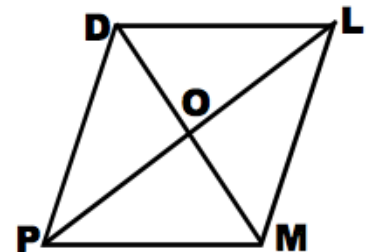
c)  $HS = \underline{\hspace{2cm}}$

d)  $HA = \underline{\hspace{2cm}}$

15) Use the given information to answer the following questions: DLMP is a rhombus,  $DM = 16$ ,  $\angle OLM = 32^\circ$ ,  $DP = 17$ .

a)  $DO = \underline{\hspace{2cm}}$

b)  $m\angle LOD = \underline{\hspace{2cm}}$



c)  $PL = \underline{\hspace{2cm}}$

d)  $m\angle POM = \underline{\hspace{2cm}}$

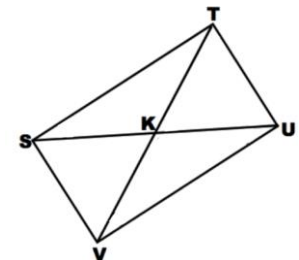
e)  $m\angle LMP = \underline{\hspace{2cm}}$

f)  $m\angle DPL = \underline{\hspace{2cm}}$

16) Use the given information to answer the following: STUV is a rectangle.  $ST = 24$ ,  $TU = 7$ , and  $\angle UTK = 52^\circ$ .

a)  $m\angle KTS = \underline{\hspace{2cm}}$

b)  $m\angle TKU = \underline{\hspace{2cm}}$

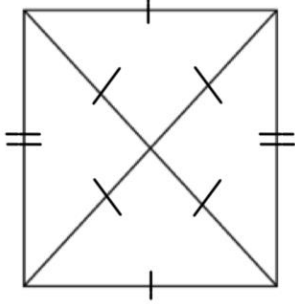


c)  $VT = \underline{\hspace{2cm}}$

d)  $SK = \underline{\hspace{2cm}}$

Directions: Determine if the following shapes are a quadrilateral, parallelogram, rhombus, rectangle, or square. Be as specific as possible!

17)

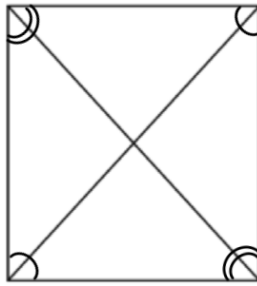


Classification: \_\_\_\_\_

Why: \_\_\_\_\_

\_\_\_\_\_

18)

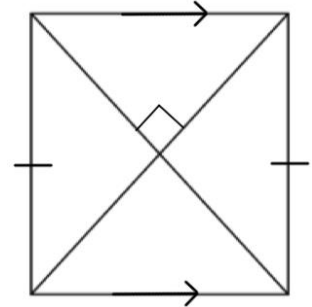


Classification: \_\_\_\_\_

Why: \_\_\_\_\_

\_\_\_\_\_

19)



Classification: \_\_\_\_\_

Why: \_\_\_\_\_

\_\_\_\_\_

Directions: For each parallelogram, find the values of  $x$  and  $y$ .

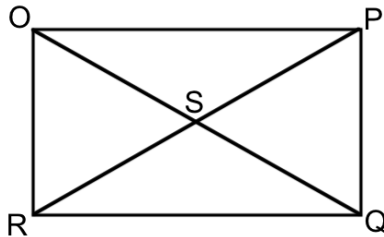
20) Rectangle OPQR

$OS = 14 - x$

$PS = 2x + 35$

$\angle OPR = 3y + 7$

$\angle ORP = 6y - 25$



$x = \underline{\hspace{1cm}}$   $y = \underline{\hspace{1cm}}$

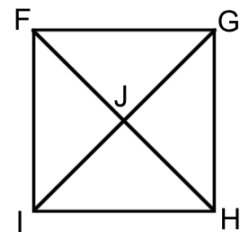
21) Square FGHI

$FG = 4x + 5$

$FI = 53 - 2x$

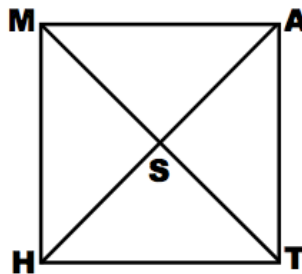
$\angle FGI = 4y + 7$

$\angle HIF = 10y - 5$



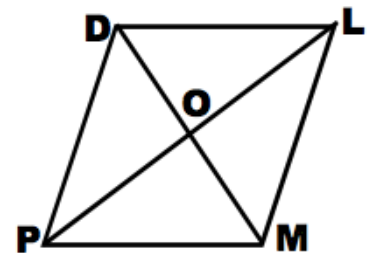
$x = \underline{\hspace{1cm}}$   $y = \underline{\hspace{1cm}}$

22) MATH is a square. If  $AT = 8$ , find the following information.



$AH = \underline{\hspace{1cm}}$   $m\angle MAS = \underline{\hspace{1cm}}$   $SUM = \underline{\hspace{1cm}}$

23) DLMP is a rhombus. If  $PL = 10$  and  $\angle DLO = 22^\circ$ , find the following information.



$LM = \underline{\hspace{1cm}}$   $m\angle PDL = \underline{\hspace{1cm}}$   $SUM = \underline{\hspace{1cm}}$