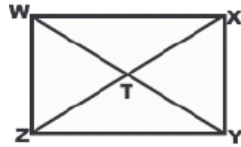Name _____   Date _____
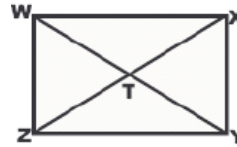
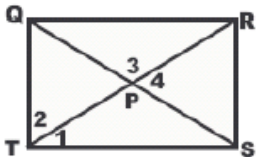1) WY=19, then ZX=___?   2) WY=19, then WT=___?   3) TX=4.5, then WY=____?

4) Rectangle GALS has diagonals $\overline{GL}$ and $\overline{AS}$. If GL=3a+6 and AS=5a-18, then a=__?
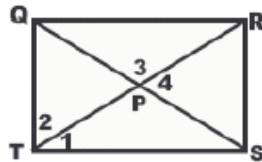
5) Rectangle BOYS has diagonals $\overline{BY}$ and $\overline{OS}$, that intersect at X. If $m\angle XOB = 70°$, then $m\angle YSO = $___ ? $m\angle BSO = $___ ?

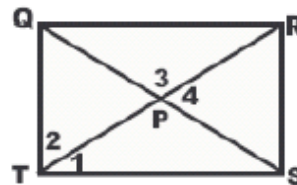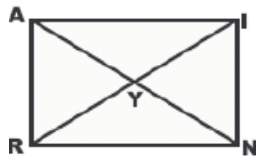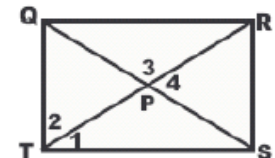6) QP=6, then RT=___?   7) QT=8, then RS=___?   8) $m\angle 1 = 55°$, find the measures of $\angle 2$, $\angle 3$, and $\angle 4$.
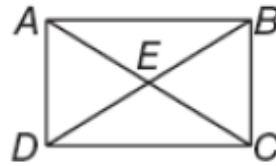

9) In rectangle RAIN, YR=3x and NY=18. Solve for x.   10) $m\angle 3 = 110°$, find the measures of $\angle 1$, $\angle 2$, and $\angle 4$.
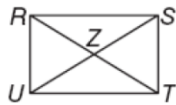
8) If $m\angle DAC = 2x+4$ and $m\angle BAC = 3x+1$, find $m\angle BAC$.

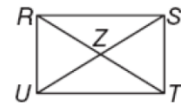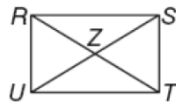Quadrilateral RSTU is a rectangle. Explain your reasoning.
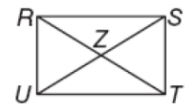
9) If UZ=x+21 and ZS=3x-15, find US.
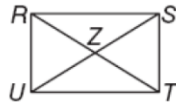

10) If RZ=3x+8 and ZS=6x-28, find UZ.
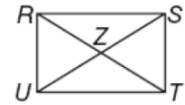

11) If RT=5x+8 and RZ=4x+1, find ZT.

12) If $m\angle SUT = 3x+6$ and $m\angle RUS = 5x-4$, find $m\angle SUT$.

13) If $m\angle SRT = x+9$, $m\angle UTR = 2x-44$, find $m\angle UTR$.

14) If $m\angle RSU = x+41$ and $m\angle TUS = 3x+9$, find $m\angle RSU$.

Quadrilateral GHJK is a rectangle. Find each measure if $m\angle 1 = 37$. **Explain** your reasoning.
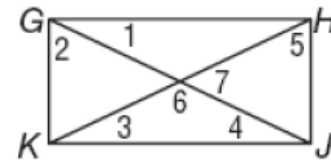
15) $m\angle 2$ 16) $m\angle 3$

17) $m\angle 4$ 18) $m\angle 5$

19) $m\angle 6$ 20) $m\angle 7$

Determine whether ABCD is a rectangle. Justify your answer.

5. $A(10, 4), B(10, 8),$
$\quad C(-4, 8), D(-4, 4)$

6. $A(3, 7), B(10, 7),$
$\quad C(11, 12), D(4, 12)$

Quadrilateral RSTV is a rectangle. Find the values of x and y.

1. $VW = 2x + y$
$\quad WS = 36$
$\quad RS = x - y$
$\quad VT = 9$

2. $VR = y$
$\quad TS = x + 11$
$\quad VT = y - 3x$
$\quad RS = x + 2$