

Rectangles, Rhombi, & Squares

1. RSTU is a rectangle. Use the given information to find the missing side length.

a. If  $UZ = x + 21$  and  $ZS = 3x - 15$ , then find  $US = \underline{78}$ .

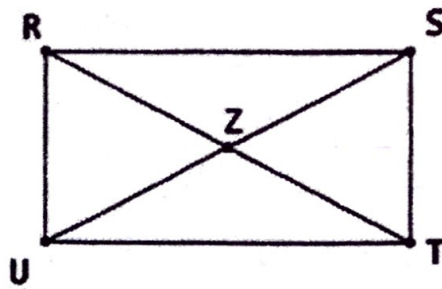
b. If  $RZ = 3x + 8$  and  $ZS = 6x - 28$ , then find  $UZ = \underline{44}$ .

c. If  $RT = 5x + 8$  and  $RZ = 4x + 1$ , then find  $ZT = \underline{9}$ .

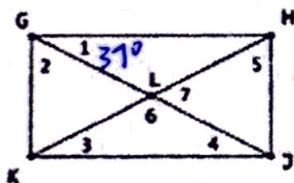
d. If  $m\angle SUT = (3x + 6)^\circ$  and  $m\angle RUS = (5x - 4)^\circ$ , then find  $m\angle SUT = \underline{39^\circ}$ .

e. If  $m\angle SRT = (x^2 + 9)^\circ$  and  $m\angle UTR = (2x + 44)^\circ$ , then find  $x = \underline{7 \text{ or } -5}$ .

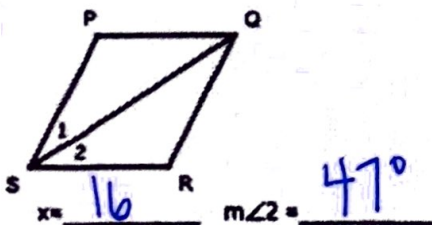
f. If  $m\angle RSU = (x^2 - 1)^\circ$  and  $m\angle TUS = (3x + 9)^\circ$ , then find  $m\angle RSU = \underline{24^\circ \text{ or } 3^\circ}$ .



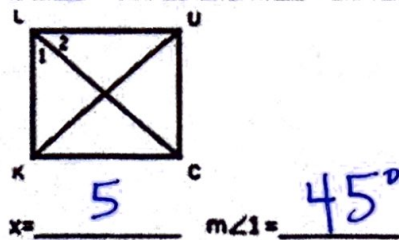
2. GHJK is a rectangle. Find all numbered angles if  $m\angle 1 = 37^\circ$ .



3. PQRS is a rhombus. If  $m\angle PQR = 5x + 14$  and  $m\angle 1 = 3x - 1$ , find  $x$  and the  $m\angle 2$ .



4. LUCK is a square. Find  $x$  and  $m\angle 1$ , if  $m\angle 1 = 4x + 25$  and  $m\angle 2 = 5x + 20$ .



5. PRYZ is a rhombus.  $RK = 4y + 1$ ,  $ZK = 7y - 14$ ,  $PK = 3x - 1$ , and  $YK = 2x + 6$ . Find each value or measure.

a.  $PY = 40$

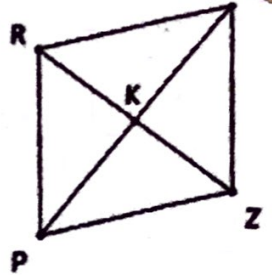
b.  $RZ = 42$

c.  $RY = 29$

d.  $m\angle YKZ = 90^\circ$

e.  $y = 5$

f.  $x = 7$



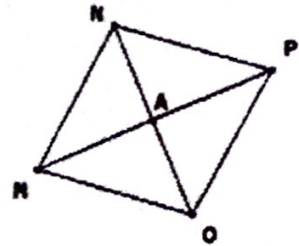
6. MNPO is a rhombus.  $PQ = 3\sqrt{2}$ ,  $PA = 4x - 1$ , and  $AM = 9x - 6$ . Find each measure.

a.  $AQ = 3$

b.  $m\angle MNP = 90^\circ$

c.  $m\angle APQ = 45^\circ$

d.  $PM = 6$



7. RECT is a rectangle. Find each measure.

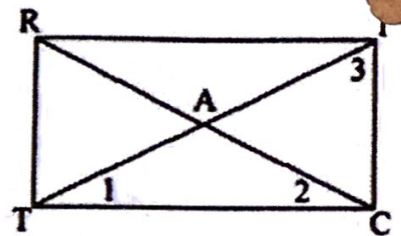
a)  $RA = 5$ ;  $TE = 10$

b)  $ET = 12$ ;  $RC = 12$

c)  $m\angle 1 = 18$ ;  $m\angle 2 = 18$

d)  $m\angle 1 = 4n$ ;  $m\angle 3 = 8n - 6$ ;  $n = 8$

e)  $RA = 7x - 8$ ;  $AE = 6x$ ;  $TE = 96$



8. RHOM is a rhombus.

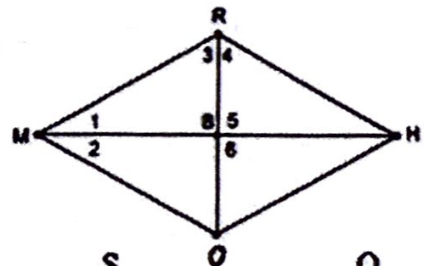
a)  $MB = 8$ ;  $BH = 8$

b)  $m\angle 3 = 42$ ;  $m\angle 4 = 42^\circ$ ;  $m\angle 1 = 48^\circ$

c)  $RM = 12$ ;  $MO = 12$

d)  $m\angle 1 = 6x - 4$ ;  $m\angle 2 = 3x + 5$ ;  $x = 3$

e)  $m\angle 1 = 2x$ ;  $m\angle 3 = 7x$ ;  $x = 10$ ;  $m\angle 1 = 20^\circ$



9. SQUA is a square.

a)  $m\angle 2 = 9x$ ;  $x = 5$

b)  $m\angle 3 = 10x$ ;  $x = 9$

c)  $SA = 5x - 9$ ;  $AU = 2x + 15$ ;  $x = 8$ ;  $m\angle U = 90^\circ$

