

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

Class: \_\_\_\_\_

Topic: \_\_\_\_\_

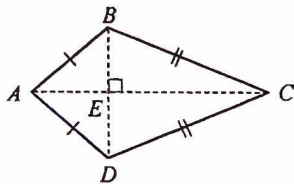
Date: \_\_\_\_\_

Main Ideas/Questions

Notes

# PROPERTIES OF A Kite

A kite is a quadrilateral with the following properties:



- Exactly two pairs of consecutive congruent sides.  
(  $\overline{AB} \cong \overline{AD}$  and  $\overline{BC} \cong \overline{DC}$  )
- One pair of opposite angles are congruent.  
(  $\angle ABC \cong \angle ADC$  )
- Diagonals are perpendicular.  
(  $\overline{AC} \perp \overline{BD}$  )

**Practice!** If each quadrilateral below is a kite, find the missing values.

1.  $m\angle B = \underline{\hspace{2cm}}$   
 $m\angle D = \underline{\hspace{2cm}}$

2.  $m\angle J = \underline{\hspace{2cm}}$   
 $m\angle K = \underline{\hspace{2cm}}$

3.  $m\angle PTQ = \underline{\hspace{2cm}}$   
 $m\angle PQT = \underline{\hspace{2cm}}$   
 $m\angle QRT = \underline{\hspace{2cm}}$

4.  $m\angle GDE = \underline{\hspace{2cm}}$   
 $m\angle DEH = \underline{\hspace{2cm}}$   
 $m\angle DGH = \underline{\hspace{2cm}}$

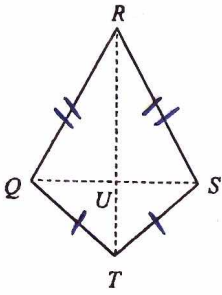
5.  $m\angle 1 = \underline{\hspace{2cm}}$   
 $m\angle 2 = \underline{\hspace{2cm}}$   
 $m\angle 3 = \underline{\hspace{2cm}}$   
 $m\angle 4 = \underline{\hspace{2cm}}$   
 $m\angle 5 = \underline{\hspace{2cm}}$   
 $m\angle 6 = \underline{\hspace{2cm}}$   
 $m\angle 7 = \underline{\hspace{2cm}}$

6.  $m\angle 1 = \underline{\hspace{2cm}}$   
 $m\angle 2 = \underline{\hspace{2cm}}$   
 $m\angle 3 = \underline{\hspace{2cm}}$   
 $m\angle 4 = \underline{\hspace{2cm}}$   
 $m\angle 5 = \underline{\hspace{2cm}}$   
 $m\angle 6 = \underline{\hspace{2cm}}$   
 $m\angle 7 = \underline{\hspace{2cm}}$

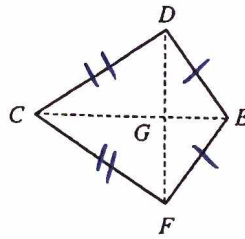
7. If  $WX = 14$  and  $WR = 8$ , find  $RZ$ .

8. If  $AC = 38$  and  $ED = 41$ , find  $CD$ .

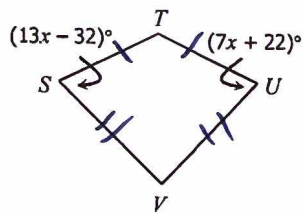
9. If  $RS = 10$  and  $RU = 9$ , find  $QS$ .



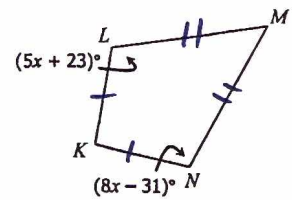
10. If  $GF = 15$  and  $CG = 23$ , find  $CD$ .



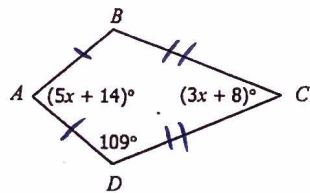
11. Solve for  $x$ .



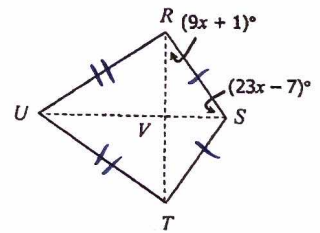
12. Find  $m\angle L$ .



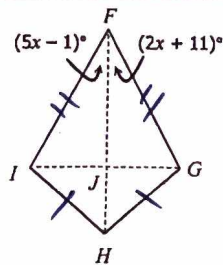
13. Solve for  $x$ .



14. Find  $m\angle STV$ .



15. Find  $m\angle FGJ$ .



16. Find  $m\angle NQP$ .

