

Geometry  
6.4 Rhombus Worksheet

Name \_\_\_\_\_

1. Circle the statement that is ALWAYS true.

Every rhombus has to be a parallelogram.

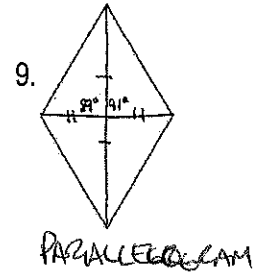
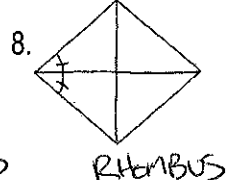
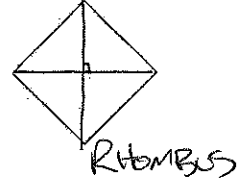
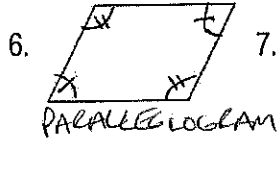
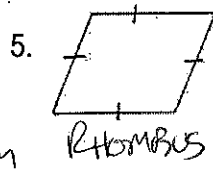
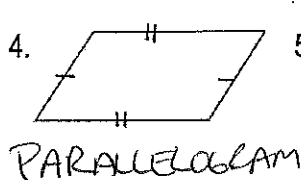
OR Every parallelogram has to be a rhombus.

2. Which word is more descriptive – parallelogram or rhombus? Explain your answer.

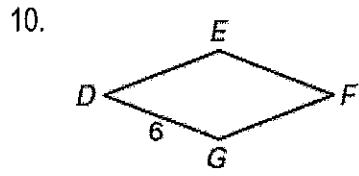
RHOMBUS - A RHOMBUS IS AN EXACT TYPE OF PARALLELOGRAM

3. Is a parallelogram a special kind of rhombus or is a rhombus a special kind of parallelogram?

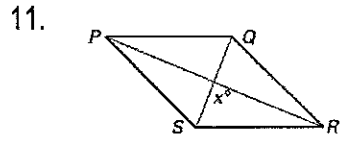
Judging by the markings on the picture and what you know about the properties of parallelograms and rhombuses, state whether each shape is a parallelogram or a rhombus.



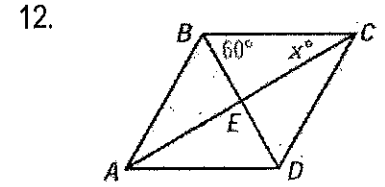
Use each RHOMBUS to find the specified lengths and measures.



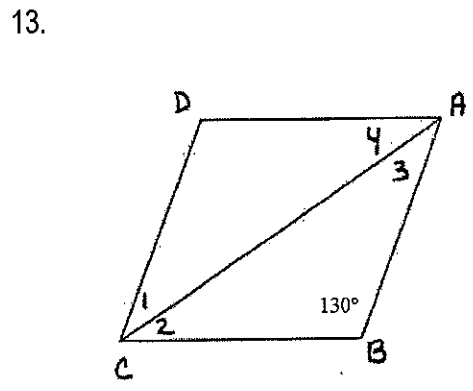
DE = 6 EF = 6 GF = 6



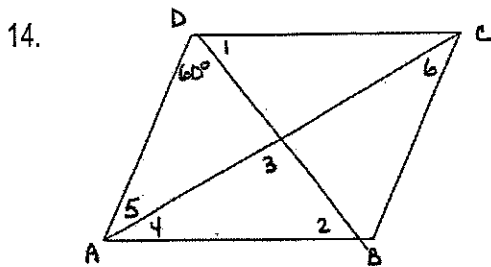
x = 90



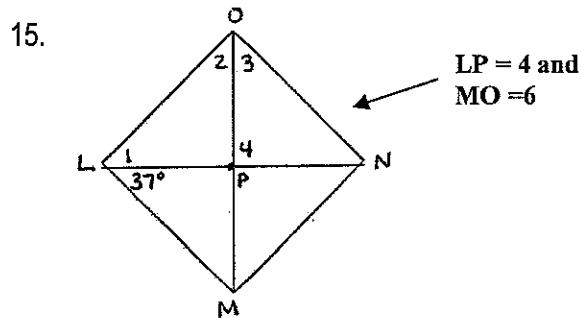
x = 30



$m\angle D = 130$   $m\angle DCB = 50$   $m\angle 1 = 25$   
 $m\angle 2 = 25$   $m\angle 3 = 25$   $m\angle 4 = 25$

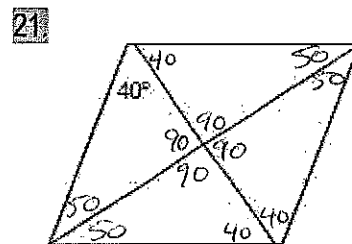
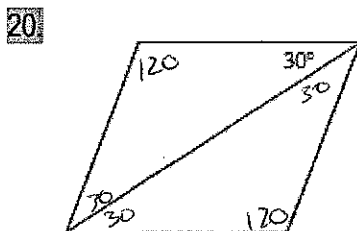
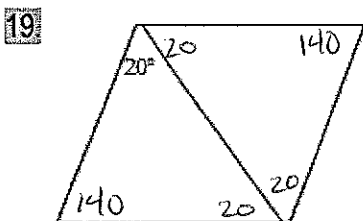
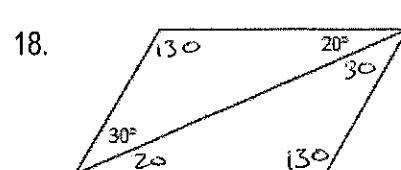
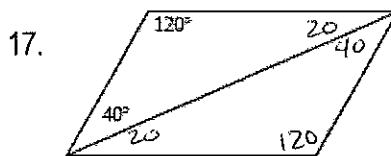
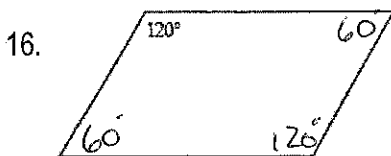


$m\angle 1 = 60^\circ$   $m\angle 2 = 60^\circ$   $m\angle 3 = 90^\circ$   
 $m\angle ADC = 120^\circ$   $m\angle DAB = 60^\circ$   $m\angle 4 = 30^\circ$   
 $m\angle 5 = 30^\circ$   $m\angle 6 = 30^\circ$

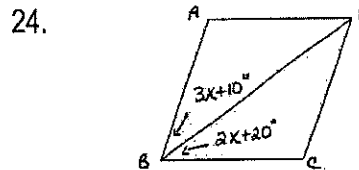
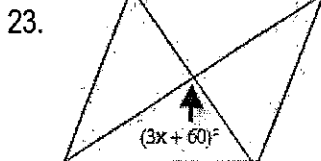
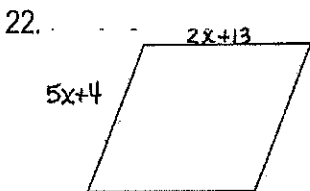


$LN = 8$   $PN = 4$   $OP = 3$   
 $MP = 3$   $m\angle 1 = 37^\circ$   $m\angle OLM = 74^\circ$   $m\angle 4 = 90^\circ$   
 $m\angle LON = 106^\circ$   $m\angle 2 = 53^\circ$   $m\angle 3 = 53^\circ$

Fill in ALL missing angles of each shape. #16-18 are parallelograms and #19-21 are rhombuses.



Using the properties of rhombuses, write and solve an algebraic equation for each picture.



Rhombus Property:  
 ALL SIDES ARE  $\cong$   
 Equation:  
 $5x+4 = 2x+13$   
 $3x = 9$   
 $x = 3$

Rhombus Property:  
 DIAGONALS ARE  $\perp$   
 Equation:  
 $3x+60 = 90$   
 $3x = 30$   
 $x = 10$

Rhombus Property:  
 DIAGONALS BISECT OP.  $\angle$ 's  
 Equation:  
 $3x+10 = 2x+20$   
 $x = 10$   
 $x = 10$   $m\angle ABD = 40$   $m\angle ABC = 80$