

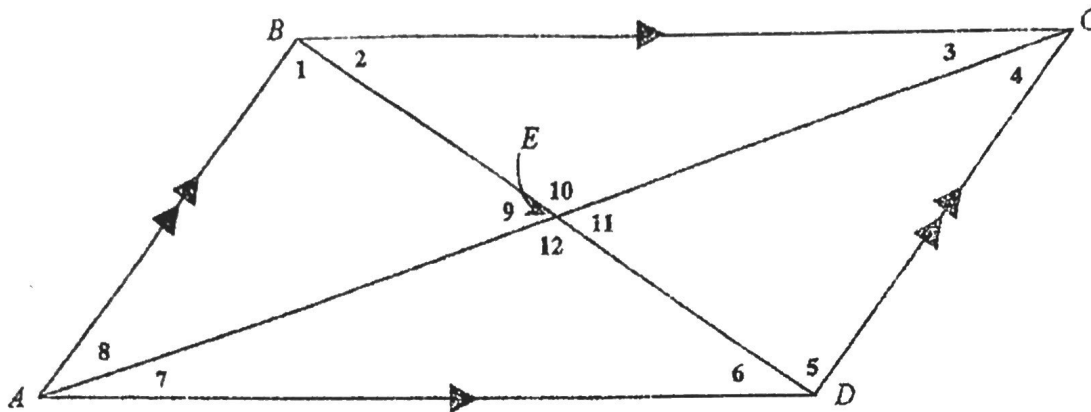
Geometry

NAME: \_\_\_\_\_

WORKSHEET: *Parallelogram Properties*

PERIOD: \_\_\_\_\_ DATE: \_\_\_\_\_

Parallelograms – Using Properties



Complete each of the following:

- 1)  $m\angle 1 = m\angle$  \_\_\_\_\_
- 2)  $m\angle 7 = m\angle$  \_\_\_\_\_
- 3)  $m\angle ABC = m\angle$  \_\_\_\_\_
- 4)  $m\angle BCD = m\angle$  \_\_\_\_\_
- 5)  $m\angle 9 = m\angle$  \_\_\_\_\_
- 6)  $mBE = m$  \_\_\_\_\_
- 7)  $mAB = m$  \_\_\_\_\_
- 8)  $\triangle ABD \cong \triangle$  \_\_\_\_\_
- 9)  $\triangle CAB \cong \triangle$  \_\_\_\_\_
- 10)  $2 \cdot mBE = m$  \_\_\_\_\_
- 11)  $mAD = m$  \_\_\_\_\_
- 12)  $mAE = m$  \_\_\_\_\_
- 13)  $\angle BAD$  is supplementary with  $\angle$  \_\_\_\_\_ and also with  $\angle$  \_\_\_\_\_.

IF  $ABCD$  is a *rectangle*, then:

- 14)  $m\angle ABC =$  \_\_\_\_\_ $^\circ$
- 15)  $mAC = m$  \_\_\_\_\_
- 16)  $m\angle 2 + m\angle 5 =$  \_\_\_\_\_ $^\circ$
- 17)  $m\angle 2 = m\angle$  \_\_\_\_\_  $= m\angle$  \_\_\_\_\_  $= m\angle$  \_\_\_\_\_
- 18) The diagonals form \_\_\_\_\_ isosceles  $\Delta$ 's

IF  $ABCD$  is a *rhombus*, then:

- 19)  $m\angle 10 =$  \_\_\_\_\_ $^\circ$
- 20)  $m\angle 2 + m\angle 3 =$  \_\_\_\_\_ $^\circ$
- 21)  $mAB$  \_\_\_\_\_  $mBC$
- 22)  $m\angle 8 = m\angle$  \_\_\_\_\_  $= m\angle$  \_\_\_\_\_  $= m\angle$  \_\_\_\_\_

IF  $ABCD$  is a *square*, then:

- 23)  $mAC = m$  \_\_\_\_\_
- 24)  $m\angle 9 = m\angle 10 = m\angle 11 = m\angle 12 =$  \_\_\_\_\_ $^\circ$
- 25)  $m\angle 1 = m\angle 2 = m\angle 3 = m\angle 4 = m\angle 5 = m\angle 6 = m\angle 7 = m\angle 8 =$  \_\_\_\_\_ $^\circ$

Name \_\_\_\_\_ Date \_\_\_\_\_

**PRACTICE**

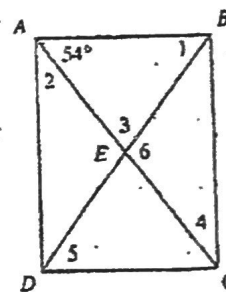
**Properties of Rectangles and Squares**

Complete the table. Place a check mark under the name of each figure for which the property is always true.

	Parallelogram	Rhombus	Rectangle	Square
1. The diagonals are perpendicular.				
2. The figure has four right angles.				
3. The opposite sides are congruent.				
4. The diagonals are congruent.				
5. The figure has four congruent sides.				
6. The diagonals bisect each other.				
7. The consecutive angles are supplementary.				
8. Each diagonal bisects a pair of opposite angles.				
9. The figure has exactly four lines of symmetry.				
10. The figure is a rectangle.				

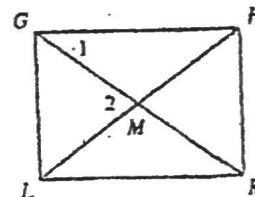
$ABCD$  is a rectangle, with  $AC = 18$ . Find each length or angle measure.

11.  $m\angle BCD$  \_\_\_\_\_      12.  $m\angle 1$  \_\_\_\_\_      13.  $m\angle 2$  \_\_\_\_\_  
 14.  $m\angle 3$  \_\_\_\_\_      15.  $m\angle 4$  \_\_\_\_\_      16.  $m\angle 5$  \_\_\_\_\_  
 17.  $m\angle 6$  \_\_\_\_\_      18.  $AE$  \_\_\_\_\_      19.  $DB$  \_\_\_\_\_



$GHLK$  is a rectangle that is not a square. Answer true or false.

20.  $GHLK$  and its diagonals form four congruent triangles. \_\_\_\_\_  
 21.  $GHLK$  and its diagonals form four isosceles triangles. \_\_\_\_\_  
 22.  $\angle 1 \cong \angle 2$  \_\_\_\_\_  
 23.  $\triangle GHL \cong \triangle KHL$  \_\_\_\_\_  
 24.  $\overline{GK}$  is a line of symmetry. \_\_\_\_\_  
 25.  $\triangle GML \cong \triangle HMK$  \_\_\_\_\_  
 26.  $\overline{GR} \cong \overline{HL}$  \_\_\_\_\_



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