Name **Key** Date _____ Pd ____

7.2 Parallelogram DAY ONE CYU

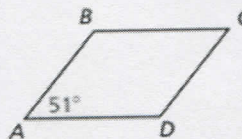| CONCEPTS	BASIC	INTERMEDIATE	ADVANCED
Properties of parallelograms	1, 2, 3, 4	5, 6	7, 8, 9
Parallel lines & transversals	14 - 16		
Applying the properties			10 - 13

1. Find the value of each variable in the parallelogram.

$x = 9, y = 15$
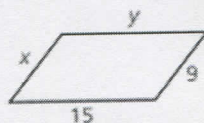
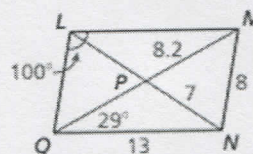2. Find the measure of the indicated angle in the parallelogram. Find $m\angle B$.

$129°$

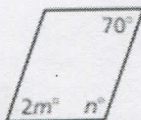*Find the indicated measure in parallelogram LMNQ. Explain your reasoning in words or with work.*

3. LM $= 13$ 4. $m\angle LMN = 80°$
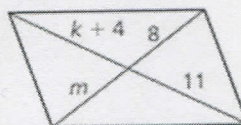

Find the value of each variable in the parallelogram.

5. $M = 35$
          $n = 110$

6. $K = 7$
          $m = 8$

7. **ERROR ANALYSIS** Describe and correct the error in using properties of parallelograms.

consecutive ∡'s R supp.

$m\angle S + m\angle V = 180$

$m\angle V = 130°$

Because quadrilateral STUV is a parallelogram, $\angle S \cong \angle V$. So, $m\angle V = 50°$.

8. Find the coordinates of the intersection of the diagonals of the parallelogram with given vertices:

W(- 2, 5), X(2, 5), Y(4, 0), & Z(0, 0).

$(1, 2.5)$

9. Three vertices of parallelogram DEFG are given. Find the coordinates of the remaining vertex.
   D(0, 2), E(- 1, 5), & G(4, 0)

   F (3, 3)

10. **MATHEMATICAL CONNECTIONS** Find the measure of each angle if the measure of one interior angle of a parallelogram is 0.25 times the measure of another angle.

   36°; 144°

11. **MAKING AN ARGUMENT** In quadrilateral ABCD, m∠B = 124°, m∠A = 56°, and m∠C = 124°. Your friend claims quadrilateral ABCD could be a parallelogram. Is your friend correct? Explain your reasoning.

   no; answers may vary

12. **ATTENDING TO PRECISION** ∠J & ∠K are consecutive angles in a parallelogram, m∠J = $(3x + 7)°$, and m∠K = $(5x - 11)°$. Find the measure of each angle.
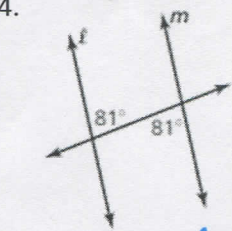
   76°; 104°

13. **PROBLEM SOLVING** In parallelogram LMNP, the ratio of LM to MN is 4:3. Find LM when the perimeter of parallelogram LMNP is 28.
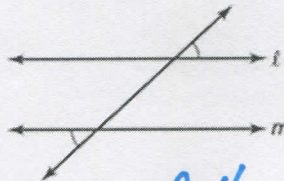
   8

Determine whether lines l and m are parallel. Justify your answer.
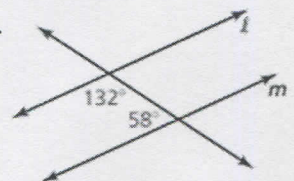
14.

81°   81°

yes; l // m
AIA Converse

15.

yes; l // m
AEA converse

16.

132°   58°

no; not supp. ∡'s

CYU Reflection: *How far can you go: basic, intermediate, or advanced?*
Rate your mastery level!
How confident are you with the skills this CYU covered? Circle the score you would give yourself.

1	2	3	4	5	6	7	8
Basic		Intermediate			Advanced		Solved ALL!