Name Key Date _____ Pd ____

7.4 Rhombus CYU

☑ *Use when you get it right all by yourself*

S *Use when you did it all by yourself, but made a silly mistake*

H *Use when you could do it alone with a little help from teacher or peer*

G *Use when you completed the problem in a group*

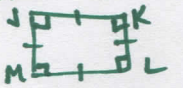
X *Use when a question was attempted but wrong (get help)*

N *Use when a question was not even attempted*

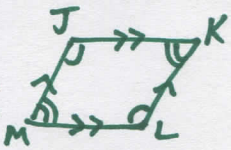
CONCEPTS	BASIC	INTERMEDIATE	ADVANCED
Properties of the rhombus	1 – 6, 8 - 11	12 - 18	20
Classifying quadrilaterals as a rhombus	7	19	
Applying properties to the rhombus	8 – 11	12 - 18	20
Triangle midsegments	21 - 23		

For any rhombus JKLM, decide whether the statement is ALWAYS or SOMETIMES true. Draw a diagram and explain your reasoning.

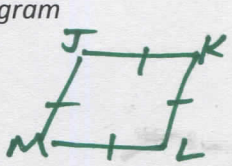
1. $\angle L \cong \angle M$ sometimes



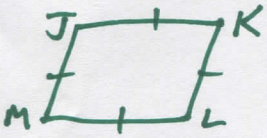
2. $\angle K \cong \angle M$ always



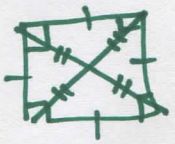
3. $\overline{JM} \cong \overline{KL}$ always



4. $\overline{JK} \cong \overline{KL}$ always



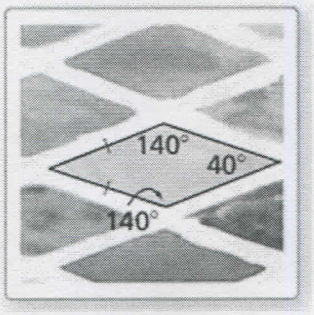
5. $\overline{JL} \cong \overline{KM}$ Sometimes



6. $\angle JKM \cong \angle LKM$

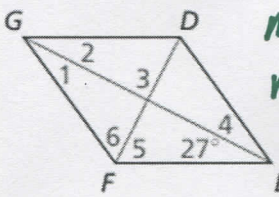
7. Classify the quadrilateral. Explain your reasoning.

rhombus; opp ∠'s R ≅ & adjacent sides R ≅



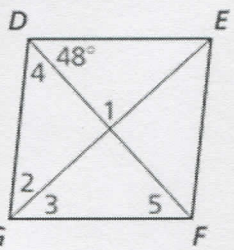
Find the measures of the numbered angles in rhombus DEFG.

8.



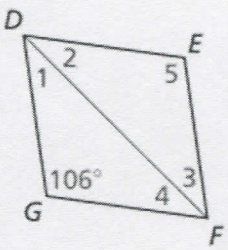
m∠1, 2, 3 = 27°
m∠3 = 90°
m∠6, 5 = 63°

9.



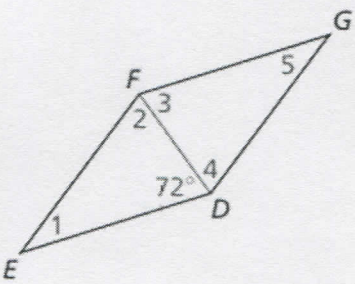
m∠1 = 90°
m∠2, 3 = 42°
m∠4 = 5 = 48°

10.



m∠1 = 2, 3, 4 = 37°
m∠5 = 106°

11.

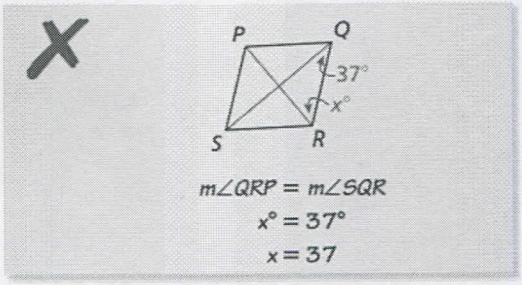


m∠1 = 5 = 36°
m∠2, 3, 4 = 72°

12. **ERROR ANALYSIS** Quadrilateral PQRS is a rhombus. Describe and correct the error in finding the value of x.

$m\angle QRP + m\angle SQR = 90°$

$X = 53$



The diagonals of rhombus ABCD intersect at E. Given that $m\angle BAC = 53°$, DE = 8, and EC = 6, find the indicated measure.

13. $m\angle DAC = 53°$

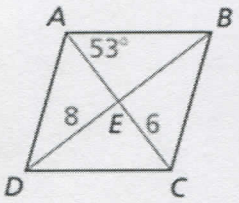
14. $m\angle AED = 90°$

15. $m\angle ADC = 74°$

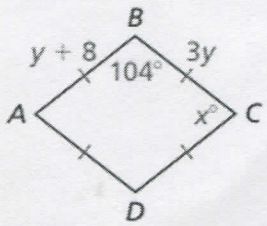
16. DB = 16

17. AE = 6

18. AC = 12



19. **MATHEMATICAL CONNECTIONS** Classify the quadrilateral. Explain your reasoning. Then find the values of x and y.



rhombus; sides $R \cong$

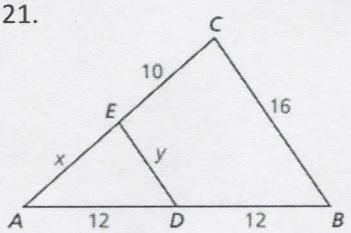
$X = 76, y = 4$

20. **MAKING AN ARGUMENT** Your friend claims a rhombus will never have congruent diagonals because it would have to be a rectangle. Is your friend correct? Explain your reasoning.

no; if a rhombus is a square, $\Rightarrow$ it is also a rectangle.

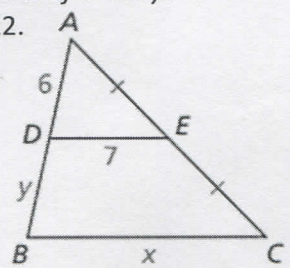
$\overline{DE}$ is a midsegment of ΔABC. Find the values of x and y.

21.



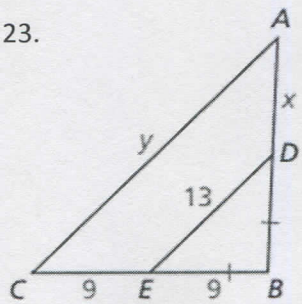
$X = 10; y = 8$

22.



$X = 14, y = 6$

23.



$x = 9, y = 26$

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!