

6.4-6.6
TEST REVIEW

(Properties of Quads)

Name: _____
Partner: _____

I. Identify the types of quadrilaterals each figure is. Write answers below the figures.

① TRAP

$$\begin{array}{r} 170 \\ 95 \\ \hline 265 \\ 95 \\ \hline 170 \end{array}$$
 ISOS TRAP

② Para vect

③ QUAD

④ TRAP

⑤ TRAP

⑥ PARA Rhombus

⑦ PARA Rhom

⑧ PARA Rhom Rect SQUARE

⑨ Kite

⑩ PARA Rhombus

II. Use properties of quads to solve for indicated measures.

⑪ RYAN is a rectangle. $\angle 1 = 38^\circ$

$\angle 1 = 38$
 $\angle 2 = 52$
 $\angle 3 = 38$
 $\angle 4 = 38$
 $\angle 5 = 52$
 $\angle 6 = 76$

⑫ MIKE is a kite. $\angle KIM = 118^\circ$, $\angle I = 30^\circ$

$\angle 2 = 32$
 $\angle 3 = 90$
 $\angle 4 = 60$
 $\angle EMI = 64$
 $\angle IKE = 60$

⑬ SAMI is a trap. Find $m\angle I$.

$15x + 7x + 4 = 180$
 $22x = 176$
 $x = 8$
 $m\angle I = 116$
 $m = 64$

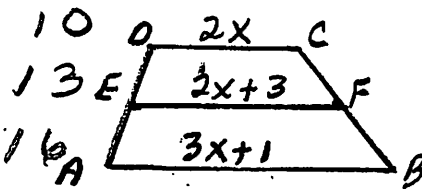
⑭ JACK is a rhombus. Find AC

$\angle JAC = 15x + 1$, $\angle CJK = 37$, $CK = 10x$

$15x + 1 = 106$
 $15x = 105$
 $x = 7$
 $CK = 70$

III Sometimes, Always, or Never true . . .

- | | |
|-------------------------------------|--------------|
| 16. A rectangle is a square. | 16. <u>S</u> |
| 17. A rhombus is a rectangle. | 17. <u>S</u> |
| 18. A trapezoid is a kite. | 18. <u>N</u> |
| 19. A square is a rhombus. | 19. <u>A</u> |
| 20. A rectangle is a parallelogram. | 20. <u>A</u> |

21.  TRAPEZOID ADCB:
EF IS MEDIAN (midsegment)
FIND X = x
FIND AB = 16

$$2x + 3 = \frac{1}{2}(3x + 1 + 2x)$$

$$2x + 3 = \frac{1}{2}(5x + 1) \quad \text{- mult both sides by 2}$$

$$4x + 6 = 5x + 1$$

$$x = 5$$

22.

Coordinate proof:

Given the vertices of the following quadrilateral determine which special quadrilateral it could be and make sure you explain your reasoning.

A(-8,0) B(-5,8) C(-2,0) D(-5,7)

$$AB = \sqrt{2^2 + 3^2} = \sqrt{64 + 9} = \sqrt{73}$$

$$BC = \sqrt{8^2 + (-3)^2} = \sqrt{64 + 9} = \sqrt{73}$$

$$AD = \sqrt{(-3)^2 + 7^2} = \sqrt{9 + 49} = \sqrt{58}$$

$$DC = \sqrt{(3)^2 + 7^2} = \sqrt{9 + 49} = \sqrt{58}$$

QUAD ABCD is a kite
b/c $AB = BC$ and $AD = DC$.

SO QUAD ~~UNIK~~ QUAD WITH EXACTLY 2
PAIRS OF CONSECUTIVE ≅ SIDES

