

Name:

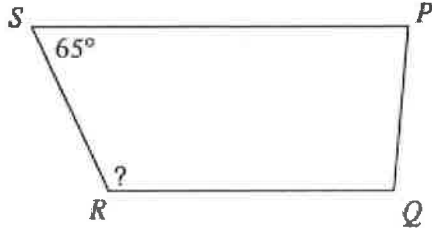
Key

Date:

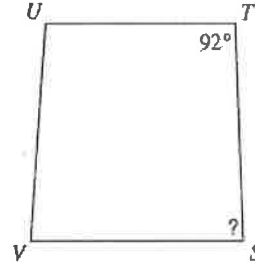
Hour:

Advanced Geometry
Review for PC #3 Unit 6/7

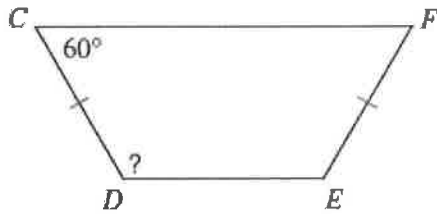
1. $\angle R = 115^\circ$ $180 - 65$



2. $\angle S = 88^\circ$



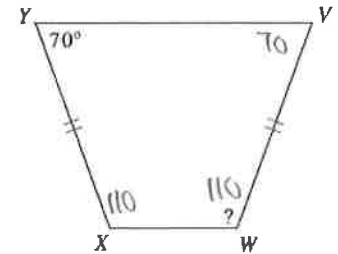
3. $CD = 15\text{cm}$
 $\angle F = 60$ $\angle D = 120$
 $\angle E = 120$ $EF = 15$



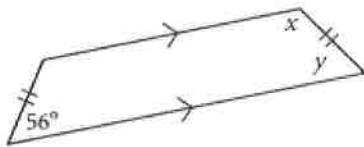
4. Name the bases of this trapezoid.
Bases: \overline{XW} , \overline{YV}

$\angle V = 70$ $\angle W = 110$

$\angle X = 110$

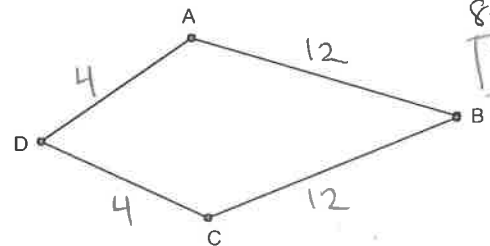


5. $x = 124$, $y = 56$



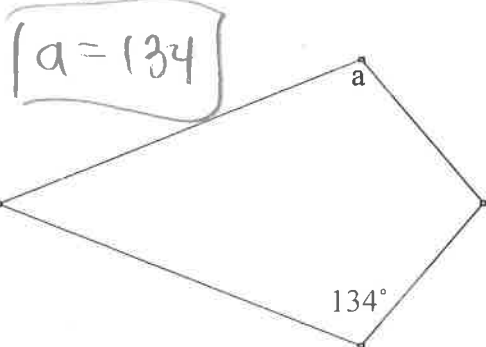
6. Polygon ABCD is a kite. If $AB = 12$ and $AD = 4$ find BC , DC , and the perimeter.

$BC = 12$ $DC = 4$ Perimeter



$8 + 24$
 32 units

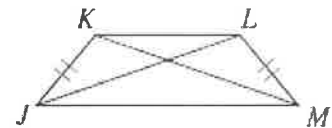
7. The figure below is a kite. Find a .



$a = 134$

8.

$KM = 22$
Find JL

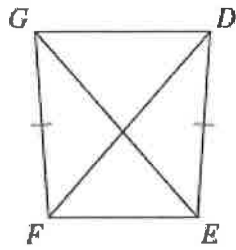


$JL = 22$

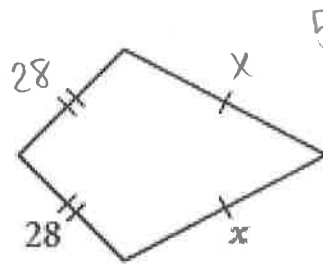
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9. $DF = 8.7$
Find EG

$EG = 8.7$



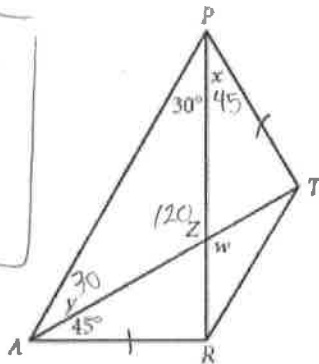
10. The perimeter of this kite is 116. Find x .



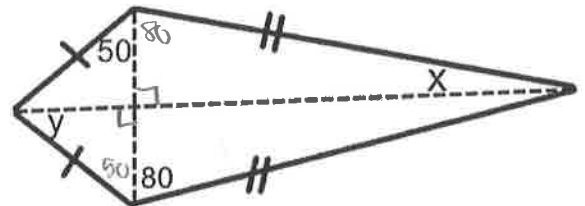
$56 + 2x = 116$
 $2x = 60$
 $x = 30$

11. $ARTP$ is an isosceles trapezoid with $RA = PT$. Find w , x , and y .

$w = 120$
 $x = 45$
 $y = 30$

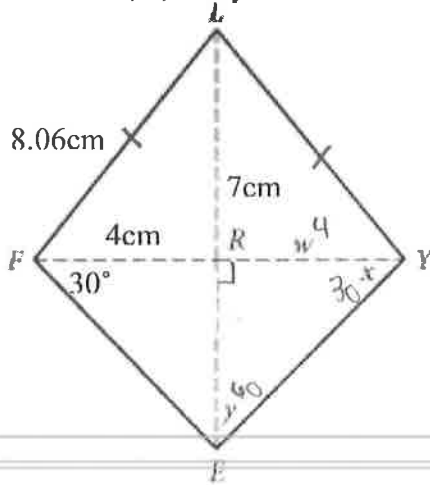


12. Find x and y .



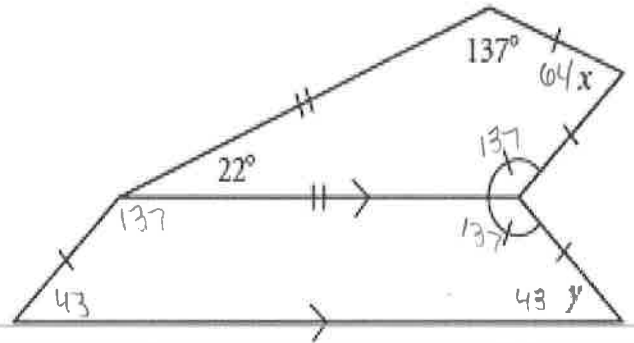
$x = 10$
 $y = 40$

13. $FLYE$ is a kite with $FL = LY$. Find w , x , and y .



$w = 4 \text{ cm}$
 $x = 30$
 $y = 60$

14. $x = 64$
 $y = 43$



Special Parallelograms

Worksheet

Name _____

For 1-8, complete the following charts by putting checks in the boxes that are true.

	4 Sides	Opp. Sides	Opp. Sides =	All Sides =	Opp. Angles =	All Angles =
1. Parallelogram	X	X	X		X	
2. Rectangle	X	X	X		X	X
3. Rhombus	X	X	X	X	X	
4. Square	X	X	X	X	X	X

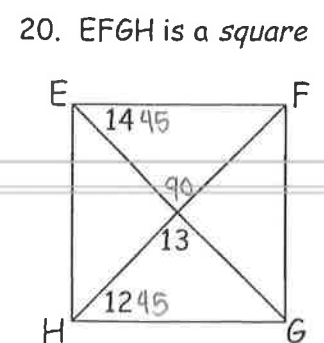
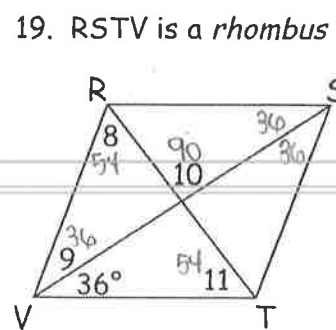
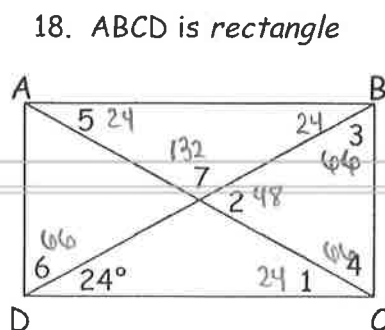
The diagonals ...	bisect each other	are congruent	bisect opposite angles	are perpendicular
5. Parallelogram	X			
6. Rectangle	X	X		
7. Rhombus	X		X	X
8. Square	X	X	X	X

For 9-17, determine if the statement is true or false.

- F 9. All quadrilaterals are parallelograms.
T 10. All parallelograms are quadrilaterals.
T 11. A square is a parallelogram.
F 12. A parallelogram with a right angle is a square.
T 13. All rectangles are parallelograms.
F 14. All rhombuses are squares.
T 15. All squares are rectangles.
F 16. A parallelogram with four congruent sides is a square.
F 17. A parallelogram with perpendicular diagonals is a square.

For 18-21, find the measure of the numbered angles in the figures.

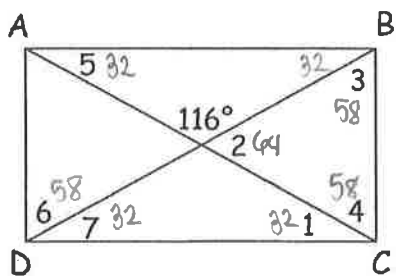
- $m\angle 1 = 24$
 $m\angle 2 = 48$
 $m\angle 3 = 66$
 $m\angle 4 = 66$
 $m\angle 5 = 24$
 $m\angle 6 = 66$
 $m\angle 7 = 132$
 $m\angle 8 = 54$
 $m\angle 9 = 36$
 $m\angle 10 = 90$
 $m\angle 11 = 54$
 $m\angle 12 = 45$



- $m\angle 13 = 90$
 $m\angle 14 = 45$

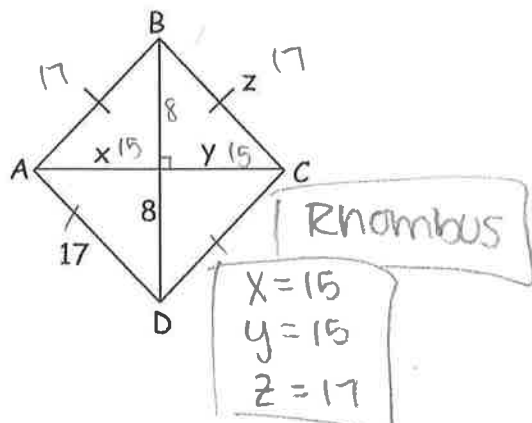
21. ABCD is a rectangle

- $m\angle 1 = 32$
- $m\angle 2 = 64$
- $m\angle 3 = 58$
- $m\angle 4 = 58$
- $m\angle 5 = 32$
- $m\angle 6 = 58$
- $m\angle 7 = 32$

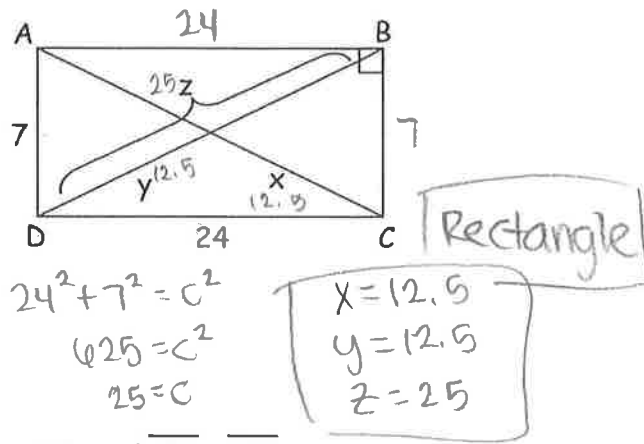


For 22-23, for the following parallelograms, (a) choose the best name, (b) find the value of each variable.

22.



23.

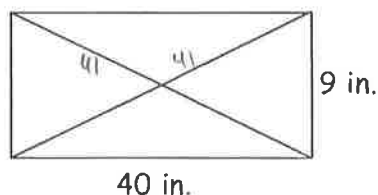


24. In quadrilateral MATH, \overline{MT} and \overline{AH} bisect each other at R and $\overline{MR} \cong \overline{HR}$.

- MATH must be a
- I. parallelogram
 - II. rectangle
 - III. square

- A. I only B. II only C. I and II D. II and III E. I, II and III

25. Cindy is making the design shown below with silver wire. It consists of a rectangle and its two diagonals. How much wire does she need to make this design?



$$9^2 + 40^2 = c^2$$

$$1681 = c^2$$

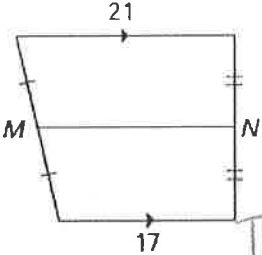
$$41 = c$$

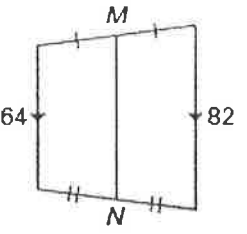
$$9 + 9 + 40 + 40 + 41 + 41$$

180 in

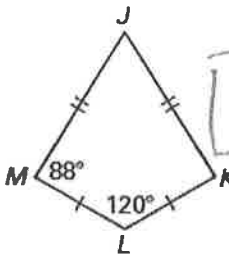
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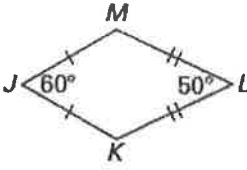
Find the length of the midsegment of the trapezoid.

6.  $\frac{1}{2}(17+21)$
 $\frac{1}{2}(38)$
 $MN = 19$

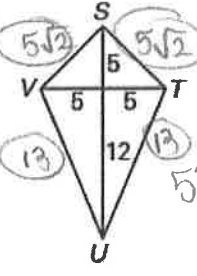
7.  $\frac{1}{2}(64+82)$
 $\frac{1}{2}(146)$
 $MN = 73$

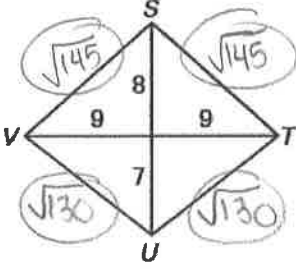
$JKLM$ is a kite. Find $m\angle K$.

8.  $m\angle K = 88$

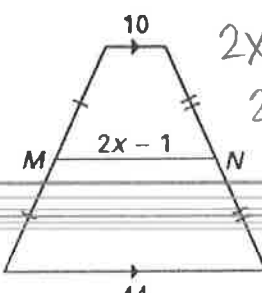
9.  $m\angle K = 125$
 $360 - 110 = 250$
 $\frac{250}{2} = 125$

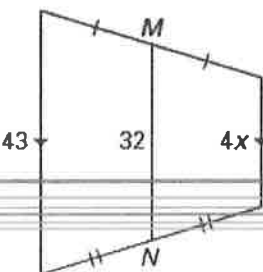
Use Theorem 8.18 and the Pythagorean Theorem to find the side lengths of the kite. Write the lengths in simplest radical form.

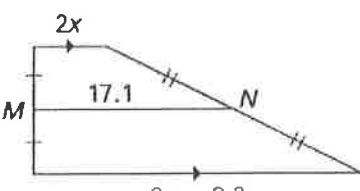
10.  $5^2 + 5^2 = c^2$
 $50 = c^2$
 $5\sqrt{2} = c$
 $5^2 + 12^2 = c^2$
 $169 = c^2$
 $13 = c$

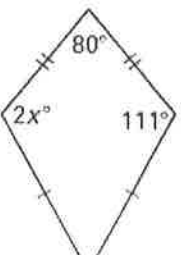
11.  $8^2 + 9^2 = c^2$
 $145 = c^2$
 $\sqrt{145} = c$
 $7^2 + 9^2 = c^2$
 $130 = c^2$
 $\sqrt{130} = c$

Find the value of x .

12.  $2x - 1 = \frac{1}{2}(10 + 44)$
 $2x - 1 = 27$
 $2x = 28$
 $x = 14$

13.  $32 = \frac{1}{2}(43 + 4x)$
 $32 = 21.5 + 2x$
 $10.5 = 2x$
 $x = 5.25$

14.  $17.1 = \frac{1}{2}(2x + 8x + 3.2)$
 $17.1 = 5x + 1.6$
 $15.5 = 5x$
 $x = 3.1$

15.  $2x = 111$
 $x = 55.5$