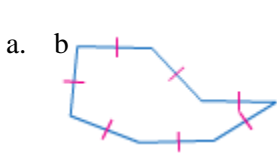


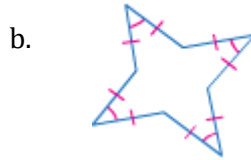
Unit 9 Quadrilaterals Review

(1.6, 6.1, 6.2, 6.4, 6.5, 6.6, 11.1, 11.2)

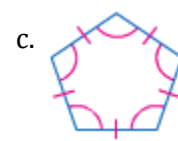
1) For each polygon below, i) Name each polygon by the number of sides; ii) Classify it as convex or concave; and iii) Use the best term to classify the polygon as equilateral, equiangular, regular or irregular.



i) _____
 ii) _____
 iii) _____

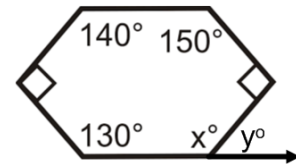


i) _____
 ii) _____
 iii) _____



i) _____
 ii) _____
 iii) _____

2) Solve for x and y in the diagram to the right.

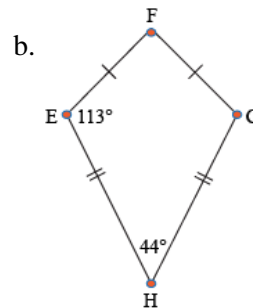
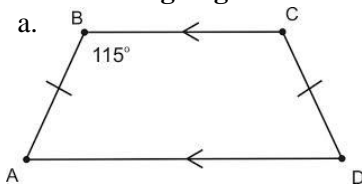


3) Answer the following questions. Show all work.

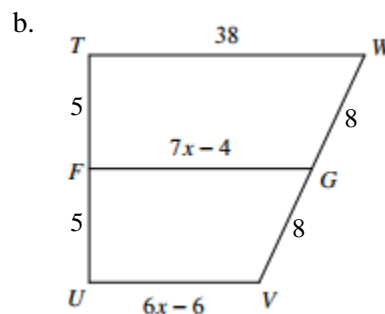
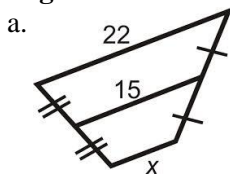
a. The sum of the measures of the interior angles of an animal pen is 900° . How many sides does the pen have?

b. If the measure of each interior angle of a regular polygon is 108° , how many sides does the polygon have?

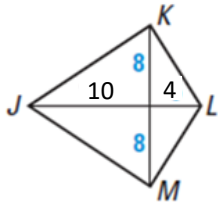
4) Find the missing angle measures of the given figure.



5) Each figure below is a trapezoid. Find the value of x .



6) $JKLM$ is a kite. Answer the following.



a. What are the side lengths of the kite? (*Leave answers as simplified radicals - NO decimals!*)

b. To find these side lengths, which property of a kite did you apply?

7) Complete the statement with *sometimes*, *always*, or *never*.

- A kite is _____ a parallelogram.
- A rhombus is _____ equilateral.
- If two of the angles of a trapezoid are congruent, then the trapezoid is _____ isosceles.
- The diagonals of a parallelogram are _____ angle bisectors.

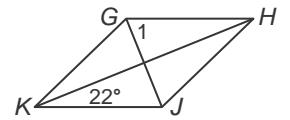
Multiple Choice: SHOW ALL WORK. Then, circle the correct answer.

8) $ABCD$ is a parallelogram with diagonals intersecting at E . If $AE = (3x + 12)$ m. and $AC = 54$ m., find the value of x . Draw a diagram!

- 5
- 7
- 13
- 14

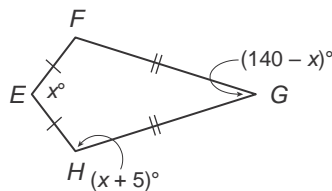
9) For rhombus $GHJK$, find $m\angle 1$.

- 22°
- 44°
- 68°
- 90°

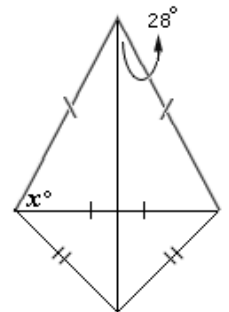


10) Find the value of x in kite $EFGH$.

- 70
- 105
- 90
- 150



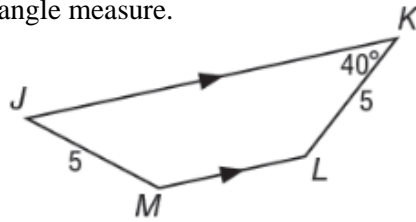
11) Find the value of x in the polygon.



12) The area of a trapezoid is 126 square inches. Its height is 9 feet and the length of one of the bases is 13 feet. Find the length of the second base.

13) $GEOM$ is a square with diagonals intersecting at T . If $ET = 6$ cm., find the exact perimeter of the square. Draw a diagram!

14) Determine what type of quadrilateral $JMLK$ is. Then, find every missing angle measure.



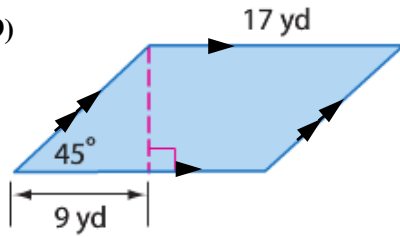
15) $RSTU$ is a rectangle with diagonals intersecting at Z . If $RZ = 3x + 8$ and $ZS = 6x - 28$, find UZ .

Directions: Put an X in the box if the quadrilateral always has the given property.

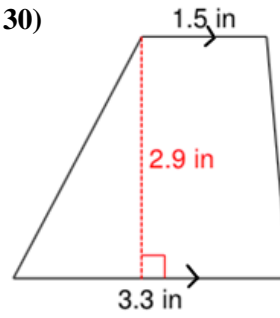
Property	Parallelogram	Rectangle	Rhombus	Square	Kite	Isosceles Trapezoid
16) Both pairs of opposite sides parallel						
17) Exactly one pair of sides parallel						
18) Diagonals perpendicular						
19) Diagonals congruent						
20) Diagonals bisect each other						
21) Diagonals bisect opposite angles						
22) Both pairs of opposite sides congruent						
23) Exactly one pair of opposite sides congruent						
24) Two pairs of consecutive sides congruent but opposite sides not congruent						
25) Exactly two pairs of consecutive angles supplementary						
26) Four pairs of consecutive angles supplementary						
27) All angles congruent						
28) Exactly one pair of opposite angles congruent						

Determine what type of quadrilateral is shown. Then find the area. Leave answers exact unless otherwise stated.

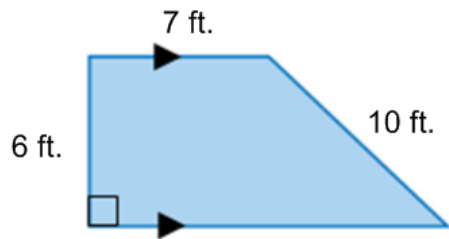
29)



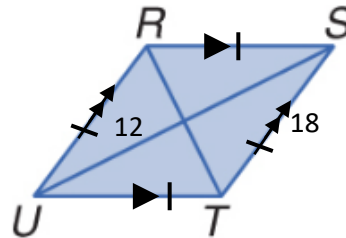
30)



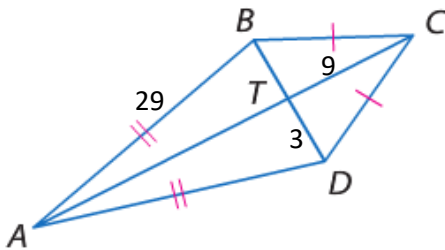
31)



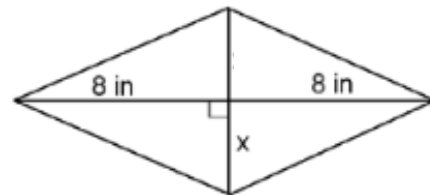
32)



33) Round your answer to the nearest hundredth.



34) The area of the rhombus below is 32 square inches. Find the value of x .



35) The area of the quadrilateral is 48 square feet. Find the value of x .

