Geometry CC
Chapter 6 Review

Name: _____

Date: _____ Period: ___

State whether the figure is a polygon; if it is a polygon, state whether the polygon is convex or concave.
HINT: No curves, no gaps, and no overlaps!

1. 

2. 

3. 

4. 

Find the indicated measures of the polygon.
HINT: For interior angles use (n – 2)180 and for exterior angles use 360°.

5. Find the **SUM** of the measures of the interior angles of a octagon.

6. Find the **SUM** of the measures of the interior angles of a pentagon.

7. Find the **SUM** of the measures of the exterior angles of a 24-gon.

8. Find the **SUM** of the measures of the exterior angles of a hexagon.

9. Find the measure of **EACH** interior angle of a regular decagon.

10. Find the measure of **EACH** interior angle of a regular nonagon.

11. Find the measure of **EACH** exterior angle of a heptagon.

12. Find the measure of **EACH** exterior angle of a 18-gon.

13. How many sides does a regular polygon have, if the measure of an interior angle is 108°?

14. How many sides does a regular polygon have, if the measure of an interior angle is 60°?

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Parallelograms!

If a quadrilateral is a parallelogram then....

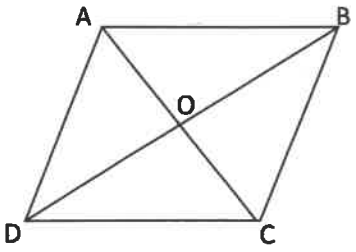
15. opposite sides are _____ and _____

16. opposite angles are _____

17. diagonals _____

18. consecutive angles are _____

ABCD is a parallelogram. m∠ABC = 40°, AB = 12, and CO = 8.



19. m∠BAD = _____

20. DC = _____

21. m∠BCD = _____

22. AO = _____

State whether each conditional statement is true. Write the converse of each conditional statement and state whether it is true.

23. If a parallelogram is a square, then it is a rhombus.

24. If a parallelogram is a square, then it is a rectangle.

25. If a quadrilateral is a rhombus, then it is a parallelogram.

If a parallelogram is a rhombus then ....

26. all 4 sides are _____

27. diagonals are _____

28. diagonals bisect _____

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If a parallelogram is a rectangle then .....

29. if it has 4 _____ angles

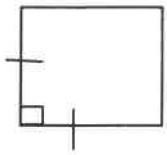
30. diagonals are _____

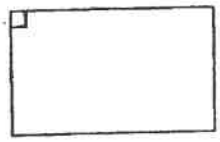
If a parallelogram is a square then .....

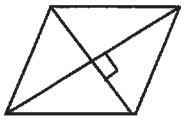
31. if all 4 sides are _____

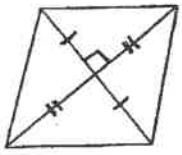
32. if it has 4 _____ angles

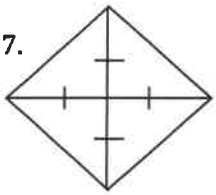
Identify each parallelogram (rhombus, rectangle, square or parallelogram). Use the BEST fit.

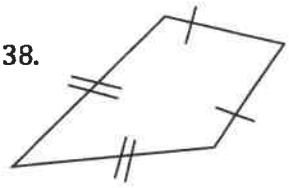
33. 

34. 

35. 

36. 

37. 

38. 

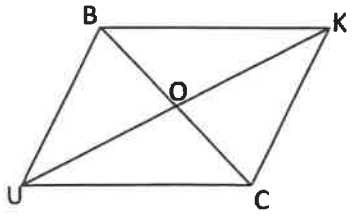
BUCK is a parallelogram with diagonals intersecting at O. Use the given information to identify the BEST type of parallelogram (parallelogram, rectangle, rhombus, or square) that the information describes.

39. $\overline{BU} \perp \overline{UC}$, $\overline{BU} \cong \overline{BK}$ _____

40. $\overline{BO} \cong \overline{CO}, \overline{UO} \cong \overline{KO}$ _____

41. $\overline{BC} \cong \overline{UK}$ _____

42. $\overline{BC} \perp \overline{UK}$ _____



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Match the properties of a quadrilateral with all of the types of quadrilateral which have that property.

43. The diagonals are congruent.

44. Both pairs of opposite sides are congruent.

45. Both pairs of opposite sides are parallel.

46. All angles are congruent.

47. All sides are congruent.

48. Diagonals bisect the angles.

A. Parallelogram

B. Rectangle

C. Rhombus

D. Square

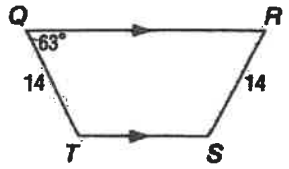
NAME _____ DATE _____ PERIOD _____

Skills Practice

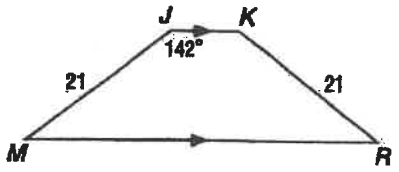
Trapezoids and Kites

ALGEBRA Find each measure.

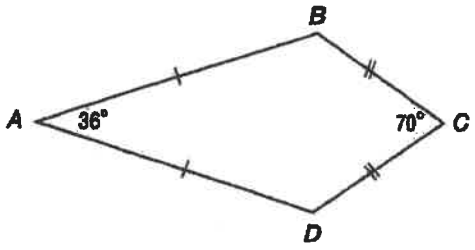
1. $m\angle S$



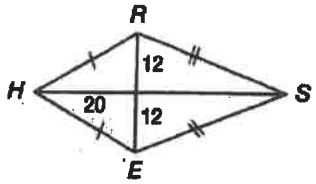
2. $m\angle M$



3. $m\angle D$



4. RH



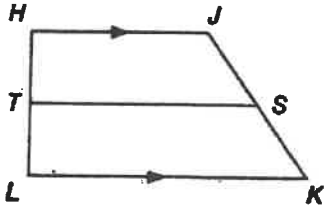
ALGEBRA For trapezoid $HJKL$, T and S are midpoints of the legs.

5. If $HJ = 14$ and $LK = 42$, find TS.

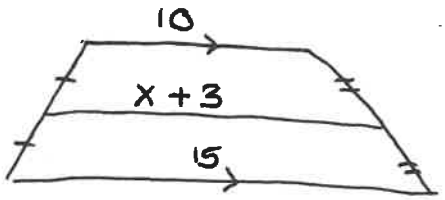
6. If $LK = 19$ and $TS = 15$, find HJ.

7. If $HJ = 7$ and $TS = 10$, find LK.

8. If $KL = 17$ and $JH = 9$, find ST.

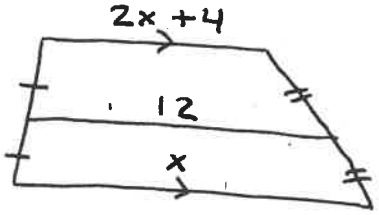


9)



Solve for x

10)

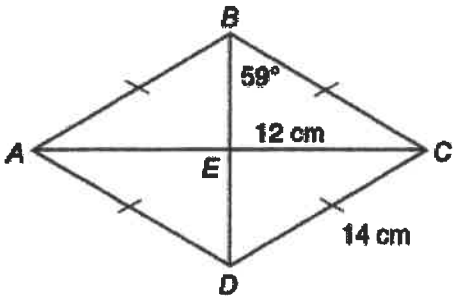


Solve for x

Geometry
Rectangle, Rhombus, and Square Practice

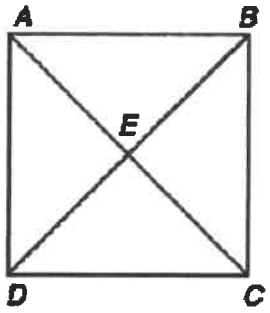
Use rhombus *ABCD* to find the following measures.

1. $m\angle BCE$
2. $m\angle BEC$
3. AC
4. $m\angle ABD$
5. $m\angle ADC$
6. AD



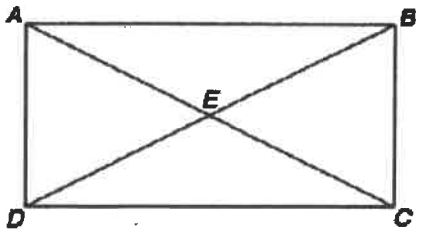
Use square *ABCD* and the given information to find each value.

7. If $m\angle AEB = 3x$, find x.
8. If $m\angle BAC = 9x$, find x.
9. If $AB = 2x + 4$ and $CD = 3x - 5$, find BC.

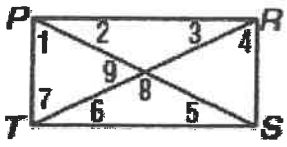


Use rectangle *ABCD* and the given information to find each value.

10. If $AC = 4x - 60$ and $AE = x + 5$, find EC.
11. If $m\angle BAC = 4x + 5$ and $m\angle CAD = 5x - 14$, find $m\angle CAD$.
12. If $AE = 2x + 3$ and $BE = 12 - x$, find BD.

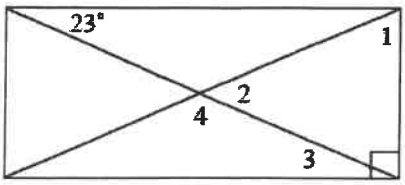


13. *PRST* is a rectangle, find the measure of all the numbered angles if $m\angle 1 = 50°$.

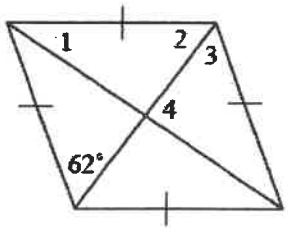


For each parallelogram, a) choose the best name, then b) find the measures of the numbered angles.

14.



15.



Use the properties of the special quadrilaterals you have learned so far to determine if the following statements are true or false. If a statement is false, rewrite it so that it is true.

16. All rectangles are squares.

17. All squares are rhombi.

18. If a quadrilateral is a rectangle and a rhombus, then it is a square.

19. If a quadrilateral has congruent diagonals, then it must be a square.

20. All rectangles, rhombi and squares are parallelograms.

21. A rhombus has four congruent angles.

22. If a quadrilateral has four congruent sides, then it must be a square.