ɔmetry Chapter 6 Review
uadrilaterals

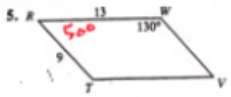
Name KEY
Date

Ch6 Test Like #20

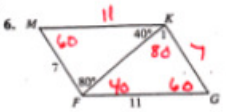
I. Parallelograms
Complete the following statements.

1. The consecutive angles of a parallelogram are supplementary.
2. The opposite sides of a parallelogram are congruent.
3. The diagonals of a parallelogram bisect each other.
4. The opposite angles of a parallelogram are congruent.

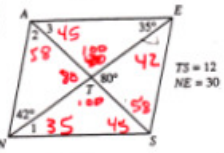
Find the measure of each angle or the length of each segment. Each quadrilateral is a parallelogram.

5. 

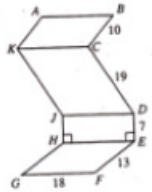
$m\angle R$ 50° $m\angle T$ 130°
WV 9 VT 13
$m\angle V$ 50°

6. 

$m\angle M$ 60 $m\angle G$ 60
$m\angle 1$ 80 KG 7
MK 11 $m\angle MFG$ 120

7. 

$m\angle 1$ 35 $m\angle 3$ 45
$m\angle NAE$ 103 AS 24
$m\angle ATN$ 80 NT 15
$m\angle 2$ 58

8. 

AB 18

9. One angle of a parallelogram measures 123°. Find the measures of the other three angles.

123°, 57°, 57°

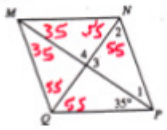
II. Complete the table. Place a check mark under the name of each figure for which the property is always true.

	Parallelogram	Rhombus	Rectangle	Square
1. The diagonals are perpendicular.		X		X
2. The figure has four right angles.	X		X	X
3. The opposite sides are congruent.	X	X	X	X
4. The diagonals are congruent.	X		X	X
5. The figure has four congruent sides.		X		X
6. The diagonals bisect each other.	X	X	X	X
7. The consecutive angles are supplementary.	X	X	X	X
8. Each diagonal bisects a pair of opposite angles.		X		X
9. The figure has exactly four lines of symmetry.	X			X
10. The figure is a rectangle.			X	X

?

III. Properties of Rectangles, Rhombuses and Squares
Given each figure, find the measure of each angle or segment.

1. *MNPQ* is a rhombus. Find the measure of each angle.

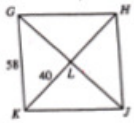


$m\angle 1$ 35 $m\angle NMQ$ 70

$m\angle MNP$ 110 $m\angle 2$ 55

$m\angle 3$ 90 $m\angle 4$ 90

2. *GHJK* is a rhombus, with *GJ* = 42. Find the length of each segment.



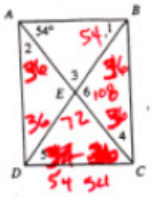
GH 58 *HJ* 58

LJ 21 42 *LH* 40

KH ~~80~~ 80

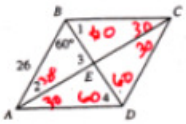
ABCD is a rectangle, with $AC = 18$. Find each length or angle measure.

3. $m\angle BCD$ 90
4. $m\angle 1$ 54
5. $m\angle 2$ 36
6. $m\angle 3$ 72
7. $m\angle 4$ 36
8. $m\angle 5$ 54
9. $m\angle 6$ 108
10. AE 9
11. DB 18



ABCD is a rhombus. Find each angle measure or segment length.

12. $m\angle 1$ 60
13. $m\angle DAB$ 60
14. $m\angle 2$ 30
15. $m\angle 3$ 90
16. $m\angle 4$ 60
17. AD 26
18. BD 26
19. ED 13



NOTE EQUILATERAL $\triangle ABD$.

20. *EFGH* is a rhombus, with $m\angle EFG = (3x - 15)°$ and $m\angle EHF = (2x - 30)°$. Find x and $m\angle EFG$. 120°

$2(2x-30) = \frac{1}{2}(3x-15)$

$4x-60 = 3x-15$

$x = 45$

$EFG = 135-15$

120

IV Properties of Rhombuses

True or *false*?

21. Every rhombus is a parallelogram. T
22. The diagonals of a rhombus bisect each other. T
23. The diagonals of a rhombus are congruent. F
24. The diagonals of a rhombus are perpendicular to each other. T
25. The consecutive angles of a rhombus are congruent. F
26. The consecutive sides of a rhombus are congruent. T
27. A rhombus and one of its diagonals form two isosceles triangles.

V. Properties of Trapezoids

For each trapezoid or triangle find the measure of each angle or the length of each segment. The dashed segments are medians.

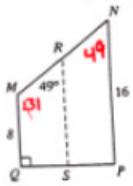
1.

$m\angle D$ 62 $m\angle B$ 105

$m\angle FED$ 118 EF 2.3

AE 11 BC 2.0

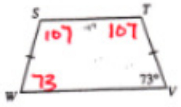
2.



$m\angle N$ 49 $m\angle M$ 131

$m\angle P$ 90 RS 12

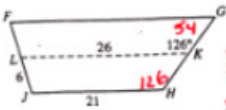
3.



$m\angle S$ 107 $m\angle W$ 73

$m\angle T$ 107

4.



$\frac{FG+21}{2} = 26$

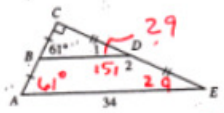
$FG + 21 = 52$

$FG = 31$

$m\angle G$ 54 $m\angle H$ 126

FL 6 FG 31

5.

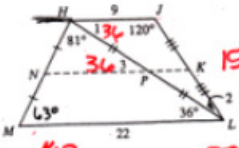


$m\angle A$ 61 $m\angle 1$ 29

$m\angle E$ 29 $m\angle 2$ 151

BD 17

*** 6.**



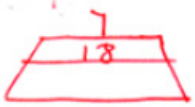
$m\angle M$ 63 $m\angle 1$ 36

$m\angle 2$ 24 $m\angle 3$ 36

NP 11 PK 4.5

7. The measure of one angle of an isosceles trapezoid is 155°. Find the measures of the other three angles. 155, 25, 25

8. The median of a trapezoid measures 18 cm and is 11 cm longer than one of the parallel sides. How long is the other parallel side? 29



$18 = \frac{1}{2}(7+x)$

$36 = 7 + x$

$29 = x$

VI. Determine the type of quadrilateral. Show all work!

Rhombus

1. A(2,5) B(6,3) C(2,1) D(-2,3)

AC = 4

BD = 8

AB = $2\sqrt{5}$

AD = $2\sqrt{5}$

DC = $2\sqrt{5}$

BC = $2\sqrt{5}$

VII. Kites

1. 

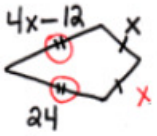
Find x.

$2x + 88 + 40 = 360$

$2x + 128 = 360$

$2x = 232$

$x = 116$

2. 

Find x.

$4x - 12 = 24$

$4x = 36$

$x = 9$