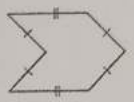
Name KEY Period _____

YOUR Score: _____/80 WOULD BE

Chapter 7 PRACTICE TEST

1. Name the polygon by its number of sides. (1 point) HEXAGON



Tell whether the polygon is concave or convex.(1 point) CONCAVE

Tell whether the polygon is regular or not regular. (1 point) NOT REGULAR

2. Find the measure of each exterior angle of a regular polygon whose sum of the measures of the interior angles is 5040°. (4 points)

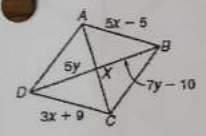
$(n-2)(180)=5040$
$n-2=28$
$n=30$

$\frac{360}{30}=12°$

3. What is the sum of the exterior angles of a regular 15-gon? (2 points)

360°

4. ABCD is a parallelogram. Find the following: (6 points)



a. AB = 30

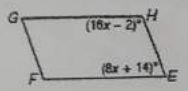
$5x-5=3x+9$
$2x=14$
$x=7$
$5(7)-5$
$=30$

b. BX = 25

$7y-10=5y$
$2y=10$
$y=5$

$7(5)-10$
$=25$

5. EFGH is a parallelogram. Find $m\angle E$. (3 points)

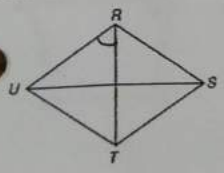


$(16x-2)+(8x+14)=180$
$24x+12=180$
$24x=168$
$x=7$

$8(7)+14$
$=70°$

$m\angle E =$ 70°

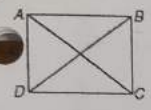
6. RSTU is a rhombus. $m\angle SRU = 112°$. Find $m\angle TRU$. (2 points)



$\frac{112}{2}=56°$

$m\angle TRU =$ 56°

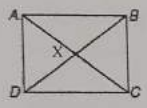
ABCD is a rectangle. $AD = 15, AC = 25$, and $DC = 20$. Find BD. (2 points)



$BD =$ 25

$AC = BD$
$BD = 25$

8. ABCD is a rectangle. $BD = 12x - 6$ and $AX = 4x + 5$. Find DX. (3 points)

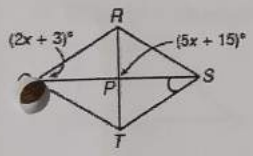


$DX =$ 21

$12x - 6 = 2(4x + 5)$
$12x - 6 = 8x + 10$
$4x = 16$
$x = 4$

$4(4) + 5$
$= 21$

9. RSTQ is a rhombus. Find $m\angle PST$. (3 points)

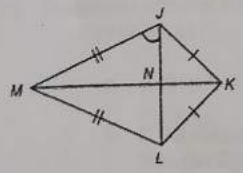


$m\angle PST =$ 33

$5x + 15 = 90$
$5x = 75$
$x = 15$

$2(15) + 3$
$= 33$

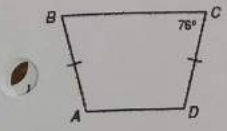
10. In kite JKLM, $m\angle JMN = 25°$. Find $m\angle NJM$. (3 points)



$m\angle NJM =$ 65°

$25 + 90 + j = 180$
$115 + j = 180$
$j = 65°$

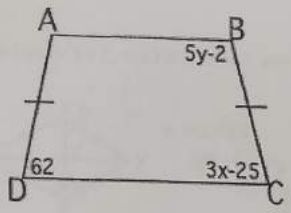
11. In trapezoid ABCD, find $m\angle A$. (3 points)



$m\angle A =$ 104°

$a + 76 = 180$
$a = 104°$

12. Find the values of x and y so that ABCD is an isosceles trapezoid with bases $\overline{AB}$ and $\overline{DC}$. (4 points)



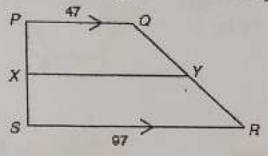
$3x-25=62$
$3x=87$
$x=29$

$62+5y-2=180$
$5y+60=180$
$5y=120$
$y=24$

$x =$ 29

$y =$ 24

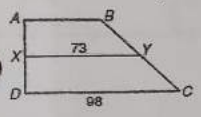
13. Find the length of the midsegment $\overline{XY}$ of trapezoid PQRS. (3 points)



$\frac{97+47}{2}$
$=\frac{144}{2}$
$=72$

$XY =$ 72

14. $\overline{XY}$ is the midsegment of trapezoid ABCD. Find AB. (3 points)



$\frac{98+x}{2}=73$
$98+x=146$
$x=48$

$AB =$ 48

15. Determine whether the following statements are sometimes, always or never true for quadrilaterals. (1 point each)

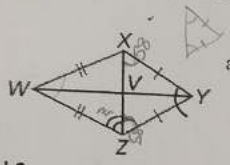
a. A rhombus is a kite. a. NEVER

b. If the diagonals of a parallelogram are congruent then the figure is a square. b. SOMETIMES

c. If both pairs of opposite angles are congruent, then the figure is a rhombus. c. SOMETIMES

d. A parallelogram is a trapezoid. d. NEVER

17. In kite WXYZ, $m\angle VXY = 58°$, and $m\angle ZWX = 50°$. Find... (4 points)



a. $m\angle XYZ$

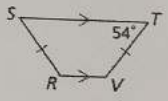
$58+58+y=180$
$116+y=180$
$y=64°$

b. $m\angle VZW$

$2x+50=180$
$2x=130$
$x=65°$

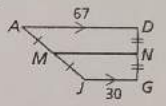
18 Find each measure. ~~(Work over with Thursday's lesson objective)~~ (5 points)

a.



$180-54$
$=126°$

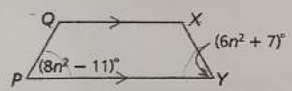
b.



$\frac{67+30}{2}$
$=\frac{97}{2}$
$=48.5$

$m\angle R =$ 126° $m\angle S =$ 54° MN = 48.5

19. Find the value of n so that PQXY is isosceles. (3 points)

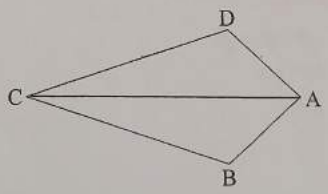


$8n^2-11=6n^2+7$
$2n^2=18$
$n^2=9$
$n=3$

~~20~~ SKIP Write a two-column proof. (5 points)

Given: Kite ABCD with $\overline{AB} \cong \overline{AD}$

Prove: $\Delta ABC \cong \Delta ADC$



Statements	Reasons