Name _____ Date _____ Pd ____

Chapter 7 Quadrilaterals Test Review

Remember the test study guide list by question in on the back of the vocabulary list. ALWAYS draw a diagram if one is not provided. Do not forget appropriate units and notation!

1. Place an X in each box in which the property is TRUE.

	Both pairs of opposite angles are congruent	Both pairs of opposite sides are congruent	At least two opposite sides are congruent	Diagonals are perpendicular	Diagonals bisect each other	All sides are congruent	Diagonals are congruent	Diagonals bisect vertex angles	Has at least two congruent sides
Parallelogram									
Rhombus									
Rectangle									
Square									
Kite									
Trapezoid									
Isosceles Trapezoid									

2. Answer the following with (A)lways, (S)ometimes, or (N)ever true.
   a. _____ The opposite sides of a kite are congruent.
   b. _____ The diagonals of a parallelogram bisect each other.
   c. _____ A rectangle is a square.
   d. _____ Each diagonal of a rectangle bisects the angles of the rectangle.
   e. _____ A parallelogram with perpendicular diagonals is a rhombus.

3. In rhombus ABCD, find the m∠ABC and m∠BCD if the m∠DCA = $(2n - 16)°$ and the m∠BDA = $(4n - 2)°$.

4. A rectangle has a diagonal of 13 cm. The width of the rectangle is 7 cm less than its length. Find the dimensions of the rectangle. HINT: draw and label the rectangle!

5. An isosceles trapezoid has legs of length $6\sqrt{2}$ and base angles that measure 45°. If the shorter base of the trapezoid measures 10 cm, find the length of the longer base. HINT: draw and label!

6. Given that WEST is a rectangle with m∠WTV = 68°, SV = 8, and TW = 6. LABEL!!!

   a. m∠TWV = _____   b. m∠VEW = _____

   c. m∠SVE = _____   d. m∠TSV = _____

   e. VE = _____   f. WS = _____

   g. EW = _____
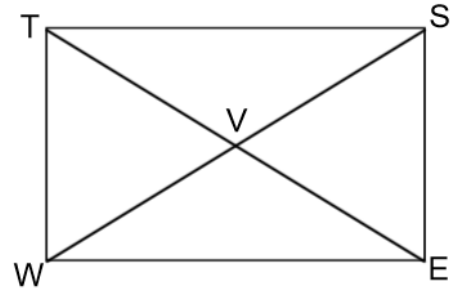
7. Trapezoid MNST with bases $\overline{MN}$ and $\overline{ST}$, m∠M = (4x + 5)°, m∠N = (6x − 7)°, m∠S = (8x − 9)°, m∠T = _____.

8. Isosceles Trapezoid KENO with bases $\overline{KE}$ and $\overline{NO}$, m∠K = (9x − 15)°, m∠E = (3x + 27)°, m∠O = _____.

9. Trapezoid LUCK with bases $\overline{LU}$ and $\overline{KC}$, m∠K = 90°, m∠U = 135°, LK = 18 in, LU 47 in, KC = _____.

10. In quadrilateral ABCD, m∠CBD = 62°, m∠BCA = 28°, m∠CDB = 62°, m∠BDA = 62°, and
m∠DAC = 28°. Based on these measures, what kind of quadrilateral is ABCD? Be as specific as
you can be! Go to the lowest possible polygon on the tree diagram as possible to be specific!

11. In parallelogram WXYZ, diagonals WY = XZ. If WX = 2x, XY = 13 – y, YZ = y + 7, and WZ = 3x, give
the most specific name **and** find the perimeter of the quadrilateral.

12. The coordinates of quadrilateral PQRS are given. Determine what kind of parallelogram is
formed by the coordinates. You **must** show enough algebra to justify your answer and be as
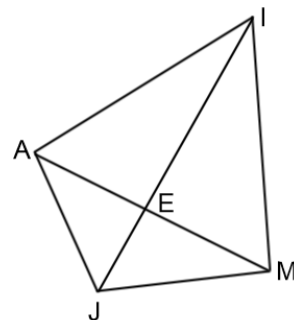specific as possible.
    a.   P(1, 3); Q(4, 1); R(1, -1); S(-2, 1)   b. P(3, 3); Q(5, -1); R(1, -3); S(-1, 1)

13. Kite JAIM with JA = JM, m∠AJM = 120°, m∠JMI = 103°, AM = 46 m, EI = 52 m. LABEL!!

    m∠JME = _____   m∠AIM = _____

    IM = _____

14. Kite KYRA with YK = YR, KR = 36 cm, HA = 12 cm, m∠KYR = 84°, YA = 20 cm, m∠YRA = 88°.

   m∠YRH = _____   m∠KAR = _____

   AR = _____   YR = _____
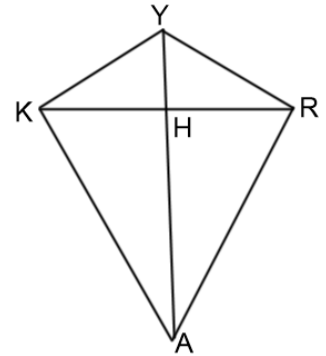
15. Given that PAIN is a **square**, answer the following.
    If PI = 24 u, then IN = _____.

    If AI = 18 u, then TN = _____.

    m∠API = _____
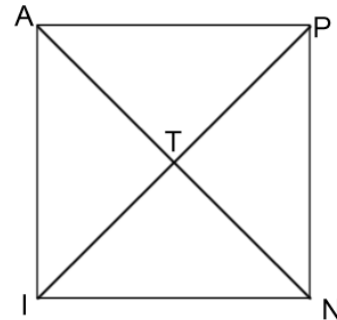
16. Given that ABED is a **rhombus** with AE = 24 mm and m∠BED = 60°.

    m∠BCE = _____   m∠ABC = _____

    m∠CED = _____   m∠ABE = _____
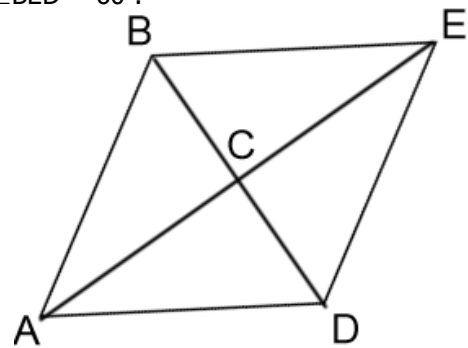
17. Solve using any method: *(factoring, quadratic formula, completing the square, etc.)*
    a. $2x^2 - 5x - 12 = 0$ b. $4x^2 - 9x + 2 = 0$