Name _____ Date _____ Period _____

PAP Geometry Unit 6 Test Review

Properties of Regular Polygons

____ 1. In a certain regular polygon, the measure of each interior angle is 150° (and, therefore, the measure of each exterior angle is 30°). How many sides does this polygon have?

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Interior Angles of a Polygon

____ 2. The four interior angles of a quadrilateral have measures as follows: (5x + 8)°, (7x + 7)°, (3x + 12)° and (2x – 7)°. Find the value of x.

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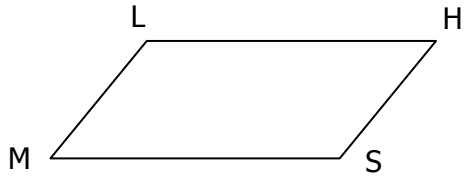
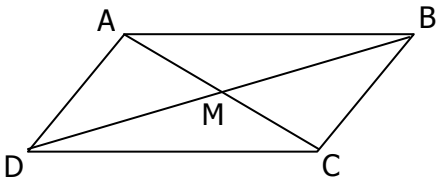
Properties of Parallelograms

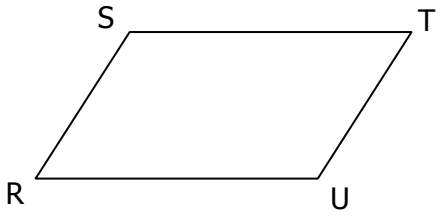
____ 3. In parallelogram MLHS, m∠M = (x – 7)° and m∠L = (4x + 22)°. Find the value of x.



____ 4. In parallelogram ABCD, the two diagonals intersect each other at Point M. If AC = 17 inches, then what is the length of $\overline{MC}$?



____ 5. In parallelogram RSTU, RS = (8x + 3) and UT = (6x + 13). Find the value of x.



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Properties of Rectangles

____ 6. If the measure of one of the angles of a rectangle is $(8x + 2)°$, then find the value of x.

____ 7. If the length of one of the diagonals of a rectangle is 18 inches, then what is the length of the other?

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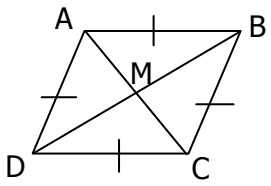
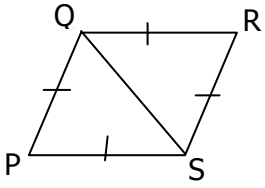
Properties of a Rhombus

____ 8. A certain rhombus has a <u>perimeter</u> of 92 inches. If the length of <u>one</u> side is $(7x + 2)$, then find the value of x.

____ 9. The two diagonals of rhombus ABCD meet at Point M. What is the measure of $\angle BMC$?



____ 10. In rhombus PQRS, $m\angle PQR = 146°$. What is the measure of $\angle PQS$?



Complete this table by filling in the missing information about these <u>REGULAR</u> polygons.

11.

Name	# of Sides	<u>Interior</u> Angles Sum of:	Measure of Each	<u>Exterior</u> Angles Sum of:	Measure of Each
Hexagon	____	_____	_____	_____	_____
Decagon	____	_____	_____	_____	_____

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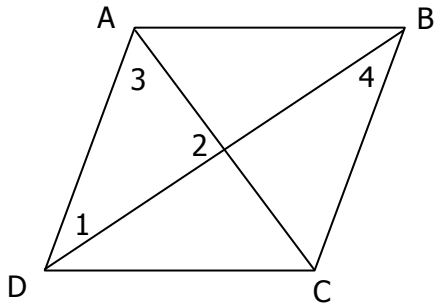
12. GIVEN: ABCD is a rhombus, $m\angle 1 = 32°$, and its perimeter is 36 inches.



a) $m\angle 2$ = _____

b) $m\angle 3$ = _____

c) $m\angle 4$ = _____

d) $m\angle DCB$ = _____

e) $\overline{BC}$ || _____ f) $\overline{AC}$ ⊥ _____ g) DC = _____ inches

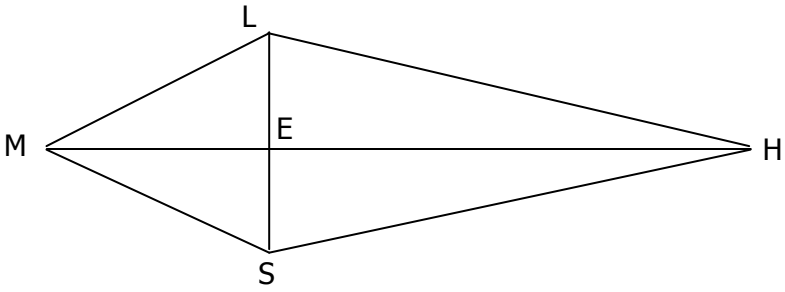
13. GIVEN: MLHS is a kite and $m\angle MLH = 152°$

a) $\overline{MS}$ ≅ _____

b) $\overline{SH}$ ≅ _____

c) $m\angle SEH$ = _____

d) $m\angle MSH$ = _____



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14. GIVEN: ABCD is an isosceles trapezoid.
$m\angle ADC = 57°$, AB = 23 inches, and DC = 31 inches.
X is the midpoint of $\overline{AD}$ and Y is the midpoint of $\overline{BC}$.

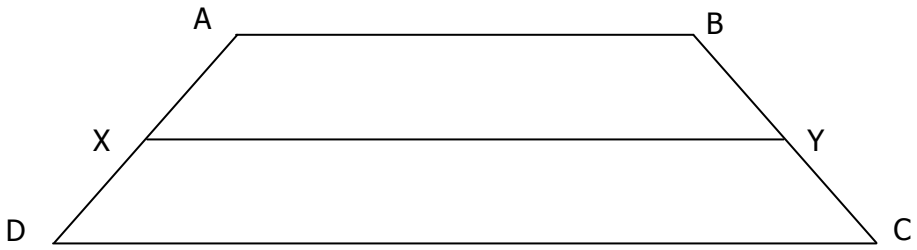
a) $m\angle DAB$ = _____

b) $m\angle ABC$ = _____

c) XY = _____ in.

d) $\overline{AB}$ || _____

e) $\overline{AD}$ ≅ _____



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Match each definition or term with the <u>most appropriate</u> choice.

____	19. A _____ is a quadrilateral with exactly two pairs of congruent <u>consecutive</u> sides.	A.	base angle
____	20. A quadrilateral with all sides being congruent	B.	bases
____	21. A quadrilateral with two pairs of parallel sides	C.	convex
____	22. A quadrilateral with four right angles	D.	exterior
____	23. A quadrilateral with four congruent sides and four right angles	E.	interior
____	24. A quadrilateral with one pair of parallel sides	F.	kite
____	25. A convex polygon that is both equilateral and equiangular is defined as a ____ polygon.	G.	legs
____	26. The sum of the measures of the _____ angles of any convex polygon may be found by using the formula: 180(n – 2) . . . where n represents the number of sides of the polygon.	H.	mid-segment
____	27. The sum of the measures of the _____ angles of any convex polygon is <u>always</u> 360°.	I.	parallelogram
____	28. The ____ of a trapezoid is a segment with its endpoints being the midpoints of the two legs.	J.	rectangle
____	29. The non-parallel sides of a trapezoid	K.	regular
____	30. A polygon is ____ if no diagonal contains a point in the exterior.	L.	rhombus
____	31. The two parallel sides of a trapezoid	M.	square
____	32. An angle formed by a leg and a base of a trapezoid	N.	trapezoid

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