Name: _____ **Date:** _____ **Rating/Score:** _____

Activity 1: Guess What?

Directions: Write the letter of your answer on the blank provided before each number.

____1. Which of the following best describes any two opposite angles of a parallelogram?
A. Any two opposite angles of a parallelogram are always congruent.
B. Any two opposite angles of a parallelogram are supplementary.
C. Any two opposite angles of a parallelogram are complementary.
D. Any two opposite angles of a parallelogram are both right angles.

____2. Which of the following is TRUE about any two consecutive angles of parallelogram?
A. Any two consecutive angles of a parallelogram are congruent.
B. Any two consecutive angles of a parallelogram are supplementary.
C. Any two consecutive angles of a parallelogram are complementary.
D. Any two consecutive angles of a parallelogram are both right triangles.

____3. Which of the following statements is/are TRUE about special parallelograms?
I. Every square is a rectangle. III. Every rectangle is a square.
II. Every rhombus is a rectangle. IV. Every parallelogram is a rhombus.
A. I only B. I and IV only C. II, III, IV D. IV only

____4. Which of the following statements is/are TRUE about diagonals of special parallelograms?
I. The diagonals of a rectangle are congruent.
II. The diagonals of an isosceles trapezoid are congruent.
III. The diagonals of a square are perpendicular and bisect each other.
IV. The diagonals of a rhombus are congruent and perpendicular to each other.
A. I and II only B. II and III only C. I, III, IV D. I, II, III

____5. Which of the following quadrilaterals whose diagonals do not bisect each other?
A. Square B. Rhombus C. Rectangle D. Trapezoid

____6. Which condition is NOT sufficient to prove that a quadrilateral is a parallelogram?
A. A pair of opposite sides are congruent and parallel.
B. Both pairs of opposite angles are congruent.
C. The diagonals are perpendicular.
D. Both pairs of opposite sides are congruent.

____7. A closed figure bounded by four line segments or sides.
A. Kite B. Triangle C. Quadrilateral D. Pentagon

____8. A part of quadrilateral whose two sides have a common vertex.
A. Opposite sides C. Consecutive sides
B. Consecutive angles D. Opposite vertices

____9. What do you call the segments joining opposite vertices of a quadrilateral?
A. Sides B. Angles C. Diagonals D. Vertex

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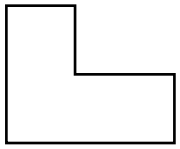
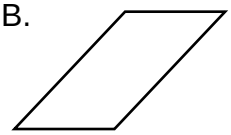
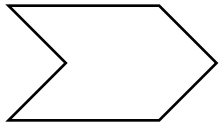
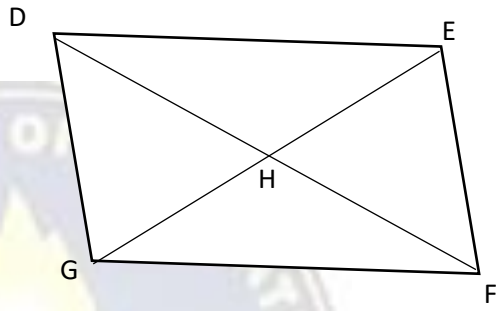
_____10. Which of the following is a convex quadrilateral?

A.  B.  C.  D. 

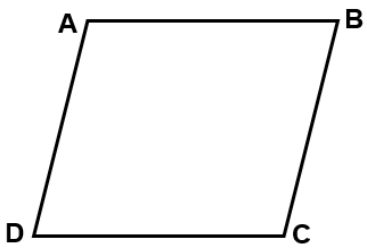
Activity 2: Yes You Can!

A. Given parallelogram DEFG. Complete each statement by writing your answer on the blank after each number.



1. $\overline{DH} \cong$ _____.
2. $\overline{DG} \cong$ _____.
3. $\angle GDE \cong$ _____.
4. $\overline{GH} = \frac{1}{2}$ _____.
5. $\overline{DE} \cong$ _____.
6. $\angle DEG \cong$ _____.
7. $\angle DFG \cong$ _____.
8. $m\angle DEF = 180° -$ _____.
9. $\Delta DFG \cong \Delta$ _____.
10. $\Delta DHE \cong \Delta$ _____.
11. If $m\angle GDE = (2x + 5)° and\ m\angle GFE = (3x - 31)°, then\ m\angle GDE =$ _____.
12. If $m\angle DGF = x°\ and\ m\angle GDE = (3x - 4)°, then\ m\angle DEF =$ _____.
13. If $GE = (3x - 4)\ and\ m\ GH = x + 5, then\ HE =$ _____.
14. If $DG = (2x - 3)\ and\ DE = (3x - 1), and\ GF = (2x + 11), then\ EF =$ _____.
15. If $m\angle DEG = (3x)°\ and\ m\angle FGE = (x + 28)°, then\ m\angle FGE =$ _____.

B. ABCD is a parallelogram. Tell which kind of special parallelogram is identified in the following. Write your answer on the blank opposite each number.



1. $\overline{AC} \cong \overline{BD}$ _____
2. AC = 4 cm; BD = 6 cm _____
3. m$\angle A$ = m$\angle B$ = m$\angle C$ = m $\angle D$ _____
4. $\Delta ABD\ and\ \Delta BCD\ are\ isosceles\ right\ triangles.$ _____
5. $\overline{AC} \cong \overline{BD};\ \overline{AB} \cong \overline{BC} \cong \overline{CD} \cong \overline{DA}$ _____

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Activity 3: Am I True / Am I False?

A. Identify whether the following statements are **Always True, Sometimes True,** or **Never True**. Write your answer on the blank before each number.

_____1. A quadrilateral with four congruent sides is a rhombus.
_____2. A parallelogram with at least one right angle is a rectangle.
_____3. A parallelogram with perpendicular diagonal is a rhombus.
_____4. A parallelogram with congruent diagonals is a rectangle.
_____5. If the diagonals of a quadrilateral bisect each other, then the quadrilateral is a parallelogram.
_____6. If the diagonals of a quadrilateral are perpendicular bisector of each other, then the quadrilateral is a rhombus.
_____7. If all angles of a quadrilateral are congruent, then the quadrilateral is a rectangle.
_____8. Every square is a rhombus.
_____9. All squares are rectangle.
_____10. Some rectangles are rhombi.

B. Complete the table below by checking whether the quadrilateral having that condition is a **rectangle**, a **rhombus**, or a **square**.

PROPERTIES OF SPECIAL PARALLELOGRAMS	RECTANGLE	RHOMBUS	SQUARE
1. At least two of its angles are right angles.			
2. Both pairs of its opposite sides are congruent.			
3. Its diagonals are congruent.			
4. Its Diagonals are congruent and perpendicular.			
5. Its diagonals are perpendicular.			
6. Its diagonals are congruent, and they bisect each other.			
7. Each pair of consecutive angles is supplementary.			
8. Its diagonals bisect each other.			
9. It is equiangular.			
10. Its diagonals bisect each other, are congruent and perpendicular.			

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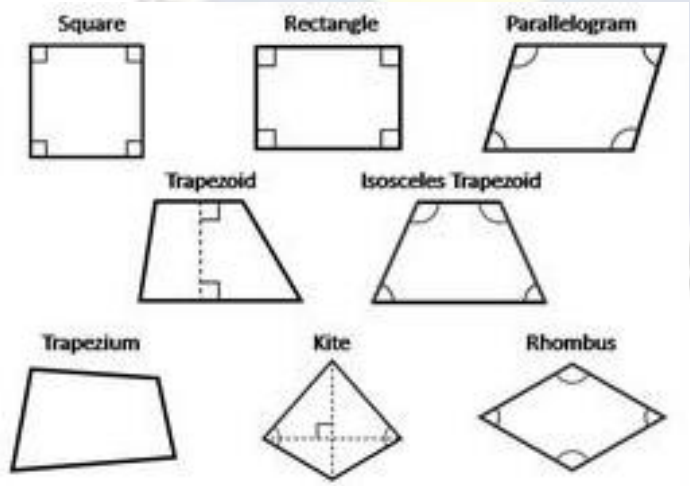
Activity 4: Puzzle – Me!

Directions: In the given crossword puzzle, box the names of the quadrilaterals that are illustrated below.

S	W	D	I	Y	Q	U	R	T	R	A	P	E	Z	I	U	M	D
F	Q	B	T	H	E	T	Y	A	F	Q	A	T	T	W	R	D	J
C	L	U	A	D	K	E	E	V	F	S	R	F	R	R	H	N	L
T	E	A	A	J	R	I	U	Y	I	G	A	E	E	T	M	R	D
D	H	F	H	R	E	C	T	A	N	G	L	E	L	M	S	H	H
K	E	Y	W	P	E	S	A	E	I	K	L	Q	P	B	H	O	A
F	J	T	R	A	P	E	Z	O	I	D	E	W	K	G	R	M	I
S	O	Q	J	O	T	F	S	R	R	Q	L	H	L	V	D	B	B
K	P	F	M	Y	G	T	M	D	B	S	O	L	R	D	T	U	E
E	R	P	A	R	A	L	L	E	L	O	G	R	A	M	X	S	D
I	Y	P	S	H	H	O	Y	B	Y	W	R	R	H	A	G	T	T
I	S	O	S	C	E	L	E	S	T	R	A	P	E	Z	O	I	D



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ANSWER KEY:

ACTIVITY 1

1 A
2 B
3. A
4. D
5. D
6. C
7. C
8. C
9. C
10. B

ACTIVITY 2

A	**B**
1. $\overline{FH}$ *or* $\overline{HF}$	1. Square; Rectangle
2. $\overline{FE}$	2. Rhombus
3. $\angle EFG$	3. Square & rectangle
4. $\overline{GE}$	4. Square & rhombus
5. $\overline{FG}$	5. Square
6. $\angle FGE$	
7. $\angle FDE$	
8. $\angle EFG$ *or* $\angle EDG$	
9. ΔFDE	
10. ΔFHG	
11. m$\angle GDE = 77$	
12. m$\angle DEF = 48$	
13. HE = 19	
14. EF = 21	
15. m$\angle FEG = 42$	

ACTIVITY 3

A

1.Sometimes True
2. Sometimes True
3. Sometimes True
4. Sometimes True
5. Always True
6. Sometimes True
7. Sometimes True
8. Always True
9. Always True
10. Never True

Activity 4

S	W	D	I	Y	Q	U	R	T	R	A	P	E	Z	I	U	M	D
F	Q	B	T	H	E	T	Y	A	F	Q	A	T	T	W	R	D	J
C	L	U	A	D	K	E	E	V	F	S	R	F	R	R	H	N	L
T	E	A	A	J	R	I	U	Y	I	G	A	E	E	T	M	R	D
D	H	F	H	R	E	C	T	A	N	G	L	E	L	M	S	H	H
K	E	Y	W	P	E	S	A	E	I	K	L	Q	P	B	H	O	A
F	J	T	R	A	P	E	Z	O	I	D	E	W	K	G	R	M	I
S	O	Q	J	O	T	F	S	R	R	Q	L	H	L	V	D	B	B
K	P	F	M	Y	G	T	M	D	B	S	O	L	R	D	T	U	E
E	R	P	A	R	A	L	L	E	L	O	G	R	A	M	X	S	D
I	Y	P	S	H	H	O	Y	B	Y	W	R	R	H	A	G	T	T
I	S	O	S	C	E	L	E	S	T	R	A	P	E	Z	O	I	D

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