6.2 Name (print first and last) 6.2 Polygons: Quadrilateral definitions and Properties	_ Per Ge	Date:_ ometry R	<u>12/22 due 12/24</u> egents 2013-2014	l Ms. Lomac
(1)  On the "6.2 Polygon Quadrilateral Definitions and Properties" cha	rt,			
(a) choose a color and mark the properties in column 2 on the	shape in	column 1		
(b) choose a different color and mark the properties in column	3 on the s	shape in c	olumn 1	
(2) $\Box$ Use the definitions and properties from #1 to fill in the blanks below	۷.			
A shape with two pairs of parallel sides is a				
A shape with exactly one pair of parallel sides is a				
The two shapes that have 4 equal sides are	an	d		
Any shape with 4 sides is a				
A shape with congruent base angles is a				
A shape with 1 pair of congruent opposite angles is a				
If I only know that a shape has 4 right angles, then I can only	y say that	it is a		
If I only know that a shape has 4 congruent sides, then I car	only say	that it is a		
From the last two statements, a square must be a		and	a	
A shape with two pairs of parallel sides could be a				,
,		, or a _		
(3) Use the definitions on the "6.2 Polygon Quadrilateral Definitions at kite factory. You work for a kite factory and are responsible for and assembling the rods that support the kites. Kites at the con Kite, Parallelogram, Rectangle, Rhombus, Square, and Isoscell if you can find a way to make non-Isosceles Trapezoid kites as kite factory have been provided for you. Experiment with differe any dot along the rod. You will have extra rods left over. Keep of shape.	nd Propert providing f npany are es Trapez well. Pape ent combin clear recor	ies" chart oolproof d manufactu oid. Your b er versions ations of t ds of the i	to help you with you irections for worke ured in the followir boss has offered y s of the rods availa wo rods. Rods car nformation needed	our job at the ers choosing ig shapes: ou a bonus able at the n intersect at d for each
<ul> <li>Your directions must include:</li> <li>(a) the shape name</li> <li>(b) an illustration of the kites with intersecting rods (you can just corners of the shape with a ruler)</li> <li>(c) a description of the rods used and how they intersect that inc</li> <li>The lengths of the two supporting rods (diagonals) with r Different? Does it matter what length they are?)</li> <li>The location where the two supporting rods (diagonals) in where they intersect?)</li> <li>The angles at which the two supporting rods (diagonals) what angle is formed when they intersect?)</li> <li>The relationship between each diagonal and the angles angles?)</li> </ul>	tape dowr ludes: espect to o ntersect. ( ) intersect. of the kite	the pape one anothe s either ro (Are they shape. (D	r rods and connec er. (Are they the s od bisected? Does perpendicular? D ooes the diagonal	t the 4 ame length? it matter oes it matter bisect any

## 6.2 Polygon Quadrilateral Definitions and Properties

1 Shape Name & Diagram	2 Definition	3 General Properties	4 Diagonal Properties
Quadrilateral	4 sided polygon	Interior angle sum = 360	
Trapezoid	quadrilateral with exactly 1 pair of parallel sides	2 pairs of same side interior angles that are supplementary	
Isosceles Trapezoid	quadrilateral with exactly 1 pair of parallel sides & congruent non- parallel sides	2 pairs of same side interior angles that are supplementary, pairs of base angles are congruent	
Parallelogram	Quadrilateral with opposite sides parallel	Opposite sides are equal, opposite angles are equal, 4 pairs of same side interior angles that are supplementary	
Rhombus	Quadrilateral with 4 congruent sides	ls a parallelogram (see parallelogram properties)	
Rectangle	Quadrilateral with 4 right angles	ls a parallelogram (see parallelogram properties)	
Square	Quadrilateral with 4 congruent sides and 4 right angles	ls a parallelogram (see parallelogram properties)	
Kite	Quadrilateral with 2 pairs of consecutive congruent sides	1 pair of opposite angles are congruent	



6.2 Exit Ticket	Name	Per	🔲 😁 l got this! 🏘
Identify the mos	t appropriate quadrilateral fo	or each description and write its name	$\square \textcircled{\otimes} I$ can with a bit of help $M$
in the blank			📋 🕲 I can't 🚓 🔲 😤 I won't bother to 🦿
(1)	My diagonals are	congruent and intersect at right angles.	🔲 🕙 l refuse to ᅟ 🐔
(2)	I have 2 pairs of co	ongruent sides, but no pairs of parallel side	S.
(3)		My base angles are congruent and my dia	gonals are congruent.
(4)	My	y diagonals bisect each other and they are	perpendicular. Sometimes I have
right angles, but I	don't have to.		
(5)	l have 4 s	sides.	
6.2 Exit Ticket			
Identify the mos	Namet appropriate quadrilateral fo	Per or each description and write its name	<ul> <li>□ ♥ I got this! 𝔅</li> <li>□ ♥ I can with a bit of help </li> <li>↑ ♦</li> <li>□ ♥ I will, given lots of help </li> <li>● I can't </li> </ul>
Identify the mos in the blank	Namet appropriate quadrilateral fo	Per or each description and write its name	<ul> <li>□ ♥ I got this! </li> <li>∅ I can with a bit of help </li> <li>∅ I will, given lots of help </li> <li>∅ I can't </li> <li>♣</li> <li>□ ♥ I con't bother to </li> <li>♥ I won't bother to </li> <li>♥ I refuse to </li> </ul>
Identify the mos in the blank (1)	Namet appropriate quadrilateral fo	Per or each description and write its name congruent and intersect at right angles.	<ul> <li>□ ♥ I got this! № </li> <li>□ ● I can with a bit of help ↑ </li> <li>□ ● I will, given lots of help ↑ </li> <li>□ ● I can't ↓ </li> <li>□ ● I can't ↓ </li> <li>□ ● I won't bother to ∮ I refuse to ∲ </li> </ul>
Identify the mos in the blank (1) (2)	Namet appropriate quadrilateral fo My diagonals are I have 2 pairs of co	Per or each description and write its name congruent and intersect at right angles.	<ul> <li>□ ♥ I got this! </li> <li>○ ● I can with a bit of help </li> <li>○ ● I will, given lots of help </li> <li>○ ● I can't </li> <li>○ ● I can't </li> <li>○ ● I won't bother to </li> <li>○ ● I refuse to </li> <li>○ ● I refuse to </li> </ul>
Identify the mos in the blank (1) (2) (3)	Namet appropriate quadrilateral fo	PerPer or each description and write its name congruent and intersect at right angles. ongruent sides, but no pairs of parallel sides My base angles are congruent and my diag	I got this! I got this! I can with a bit of help I will, given lots of help I will, given lots of help I will, given lots of help I won't bother to I won't bother to I refuse to S. gonals are congruent.
Identify the mos         in the blank         (1)         (2)         (3)         (4)	Namet appropriate quadrilateral fo My diagonals are I have 2 pairs of co My	Per or each description and write its name congruent and intersect at right angles. ongruent sides, but no pairs of parallel sides My base angles are congruent and my diagonals bisect each other and they are	<ul> <li>I got this!</li> <li>I can with a bit of help</li> <li>I can with a bit of help</li> <li>I will, given lots of help</li> <li>I can't</li> <li>I can't</li> <li>I can't</li> <li>I won't bother to</li> <li>I refuse to</li> <li>I refuse to</li> <li>I refuse to</li> <li>I refuse to</li> <li>I can't</li> <li< td=""></li<></ul>
Identify the most         in the blank         (1)         (2)         (3)         (4)         right angles, but I	Namet appropriate quadrilateral for My diagonals are I have 2 pairs of co My don't have to.	Per or each description and write its name congruent and intersect at right angles. ongruent sides, but no pairs of parallel sides My base angles are congruent and my diagonals bisect each other and they are	<ul> <li>I got this!</li> <li>I can with a bit of help</li> <li>I can with a bit of help</li> <li>I will, given lots of help</li> <li>I will, given lots of help</li> <li>I can't</li> <li>I can't</li> <li>I can't</li> <li>I won't bother to</li> <li>I refuse to</li> <li>I refuse to</li> <li>I refuse to</li> <li>I refuse to</li> <li>I perpendicular. Sometimes I have</li> </ul>
Identify the mos         in the blank         (1)         (2)         (3)         (4)         right angles, but I         (5)	Name t appropriate quadrilateral for My diagonals are I have 2 pairs of co My don't have to. I have 4 s	Per or each description and write its name congruent and intersect at right angles. ongruent sides, but no pairs of parallel sides My base angles are congruent and my diag diagonals bisect each other and they are sides.	<ul> <li>I got this!</li> <li>I can with a bit of help</li> <li>I can with a bit of help</li> <li>I will, given lots of help</li> <li>I will, given lots of help</li> <li>I can't</li> <li>I can't</li> <li>I can't</li> <li>I won't bother to</li> <li>I refuse to</li> <li>I refuse to</li> <li>I refuse to</li> <li>I perpendicular. Sometimes I have</li> </ul>
Identify the mos         in the blank         (1)         (2)         (3)         (4)         right angles, but I         (5)	Name	Per or each description and write its name congruent and intersect at right angles. ongruent sides, but no pairs of parallel sides My base angles are congruent and my diag diagonals bisect each other and they are sides.	<ul> <li>☐ ♥ I got this! </li> <li>☐ @ I can with a bit of help </li> <li>☐ @ I will, given lots of help </li> <li>☐ @ I can't </li> <li>④ I won't bother to </li> <li>④ I refuse to </li> <li>⑤ I refuse to </li> <li></li> <li>S.</li> <li>gonals are congruent.</li> <li>perpendicular. Sometimes I have</li> </ul>
Identify the most         in the blank         (1)         (2)         (3)         (4)         right angles, but I         (5)	Name	Per or each description and write its name congruent and intersect at right angles. ongruent sides, but no pairs of parallel sides My base angles are congruent and my diagonals bisect each other and they are sides.	<ul> <li>I got this!</li> <li>I can with a bit of help</li> <li>I can with a bit of help</li> <li>I will, given lots of help</li> <li>I can't</li> <li>I can't</li> <li>I can't</li> <li>I won't bother to</li> <li>I refuse to</li> <li>I refuse to</li> <li>I refuse to</li> <li>I perpendicular. Sometimes I have</li> </ul>
Identify the most         in the blank         (1)         (2)         (3)         (4)         right angles, but I         (5)	Name	Per or each description and write its name congruent and intersect at right angles. ongruent sides, but no pairs of parallel sides My base angles are congruent and my diagonals bisect each other and they are sides.	<ul> <li>I got this!</li> <li>I can with a bit of help</li> <li>I can with a bit of help</li> <li>I will, given lots of help</li> <li>I can't</li> <li>I can't</li> <li>I can't</li> <li>I can't</li> <li>I refuse to</li> <li>I refuse to</li> <li>I refuse to</li> <li>I refuse in the second s</li></ul>

6.2 Exit Ticket	Name	Per	🔲 👻 l got this! 🏘
Identify the most	appropriate quadrilateral for each desc	ription and write its name	□ ◎ I can with a bit of help $\frac{1}{2}$
in the blank			□ ⊗ I can 1 , ♣, □ ⊗ I won't bother to §
(1)	My diagonals are congruent an	d intersect at right angles.	📋 🎯 l retuse to 🛣
(2)	I have 2 pairs of congruent sides	s, but no pairs of parallel sides	
(3)	My base angl	es are congruent and my diag	onals are congruent.
(4)	My diagonals bis	sect each other and they are p	erpendicular. Sometimes I have
right angles, but I	don't have to.		
(5)	I have 4 sides.		



V POIVOORS: Uliaorijateral definitions and Properties	Per Date: <u>12/21 due 12/23</u>
ow will you get there? "A GUIDE WILL HELP ME FOLLOW	Geometry Regents 2013-2014 Ms. Lomac
Parallelogram diagram and directions.	
The lengths of the 2 support rods (diagonals) are	
The intersection of the two rods (diagonals) is locate	ed so that
The rods (diagonals) intersect and form angles that	
The relationship between each diagonal and the arc	aloc of the perallelegram is
2) Rectangle diagram and directions.	
The lengths of the 2 support rods (diagonals) are	
The lengths of the 2 support rods (diagonals) are	ed so that
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The lengths of the 2 support rods (diagonals) are
The intersection of the two rods (diagonals) is located so that
The rods (diagonals) intersect and form angles that
The relationship between each diagonal and the angles of the rhombus is
 Square diagram and directions.
The lengths of the 2 support rods (diagonals) are
The intersection of the two rods (diagonals) is located so that
The rods (diagonals) intersect and form angles that

(5) Kite diagram and directions.
The lengths of the 2 support rods (diagonals) are
The intersection of the two rods (diagonals) is located so that
The rods (diagonals) intersect and form angles that
The relationship between each diagonal and the angles of the kite is
(6) Isosceles Trapezoid diagram and directions.
The lengths of the 2 support rode (diagonale) are
The intersection of the two rods (diagonals) is located so that
The rods (diagonals) intersect and form angles that
The relationship between each diagonal and the angles of the isosceles trapezoid is

Trapezoid diagram and directions.
The lengths of the 2 support rods (diagonals) are
The intersection of the two rods (diagonals) is located so that
The rods (diagonals) intersect and form angles that
The relationship between each diagonal and the angles of the trapezoid is

(8) On the "6.2 Polygon Quadrilateral Definitions and Properties" chart under column 4 (diagonal properties) record what you learned about diagonals for each shape.

lame	e (print first and last)	Per Date: 12/21 due 12/23
.2 Pc	olygons: Quadrilateral definitions and Properties	Geometry Regents 2013-2014 Ms. Loma
ow v	will you get there? "I CAN FOLLOW A MARKED PATH."	
1) 5	Parallelogram diagram and directions.	
• /		
	The lengths of the 2 support rods (diagonals) are	
	The intersection of the two rods (diagonals) is located so th	nat
	The rods (diagonals) intersect and form angles that	
	The relationship between each diagonal and the angles of	the parallelogram is
_		
2)	Rectangle diagram and directions.	
	L I he lengths of the 2 support rods (diagonals) are	
	I he intersection of the two rods (diagonals) is located so the	nat
	I ne roas (diagonals) intersect and form angles that	
	The selection big by the term of t	44

(3) Rhombus diagram and directions.	
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The inters	ection of the two rods (diagonals) is located so that
The rods	diagonals) intersect and form angles that
The relation	nship between each diagonal and the angles of the rhombus is
Square dia	gram and directions.
The lengt	s of the 2 support rods (diagonals) are
The inters	ection of the two rods (diagonals) is located so that
The rods	diagonals) intersect and form angles that

(5) Kite	diagram and directions.
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	The lengths of the 2 support rods (diagonals) are
	The intersection of the two rods (diagonals) is located so that
	The rods (diagonals) intersect and form angles that
	The relationship between each diagonal and the angles of the kite is
(6)	Isosceles Trapezoid diagram and directions.
	The lengths of the 2 support rods (diagonals) are
	The intersection of the two rods (diagonals) is located so that
	The rods (diagonals) intersect and form angles that
	The relationship between each diagonal and the angles of the isosceles trapezoid is

(7) Trapezoid diagram and directions.

<ul> <li>The lengths of the 2 support rods (diagonals) are</li></ul>
The rods (diagonals) intersect and form angles that
The relationship between each diagonal and the angles of the trapezoid is

(8) On the "6.2 Polygon Quadrilateral Definitions and Properties" chart under column 4 (diagonal properties) record what you learned about diagonals for each shape.

(1) Parallelogram diagram and directions.

(2) Rectangle diagram and directions.

(3) Rhombus diagram and directions.

(4) Square diagram and directions.

(5) Kite diagram and directions.

(6) Isosceles Trapezoid diagram and directions.

(7) Trapezoid diagram and directions.

(8) On the "6.2 Polygon Quadrilateral Definitions and Properties" chart under column 4 (diagonal properties) record what you learned about diagonals for each shape.