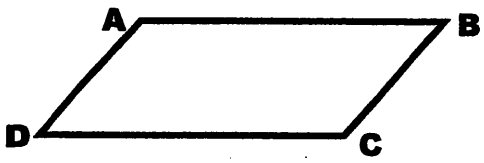
Name: _____ Date: _____
Period : _____

Essential Question: What are the similarities and differences between the special quadrilaterals?

Quadrilateral-

Parallelogram-

Mark this below in ▱ABCD



By *Definition of a Parallelogram:*

1. If a quadrilateral is a parallelogram,

   _____ ≅ _____ and _____ ≅ _____

2. If a quadrilateral is a parallelogram, then its opposite angles are congruent.

   _____ ≅ _____ and _____ ≅ _____

3. If a quadrilateral is a parallelogram, then its consecutive angles are supplementary.

   _____ + _____ = _____ and _____ + _____ = _____

4. If a quadrilateral is a parallelogram, then its diagonals bisect each other.
   (Draw in diagonals _____ and _____ above on ▱ABCD, label their intersection point E)

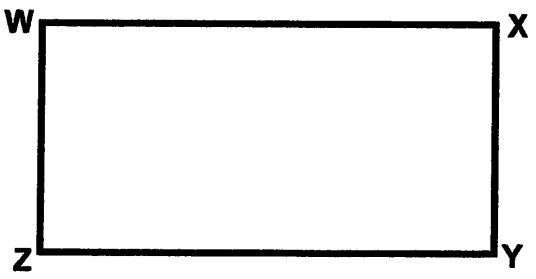
   _____ ≅ _____ and _____ ≅ _____

Theorem about Rectangles (use Rectangle ABCD below to fill in the blanks):

1. A parallelogram is a rectangle if and only if its diagonals are congruent.

   _____ ≅ _____

2. All four angles are right angles.

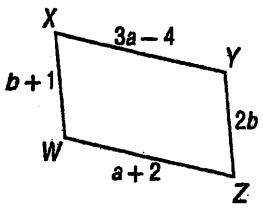


NAME _____ DATE _____ PERIOD _____ (2)

6-2 Practice
Parallelograms

ALGEBRA Find the value of each variable.

1.



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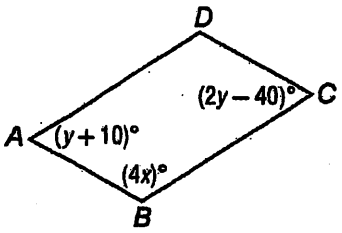

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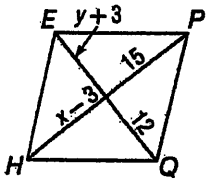
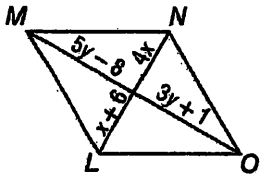
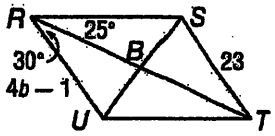


4.



ALGEBRA Use $\square RSTU$ to find each measure or value.



5. $m\angle RST =$ _____

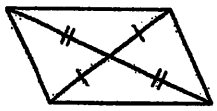
6. $m\angle STU =$ _____

7. $m\angle TUR =$ _____

8. $b =$ _____

Determine whether each quadrilateral is a parallelogram. Justify your answer.

1.



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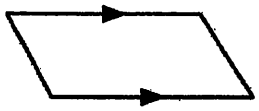
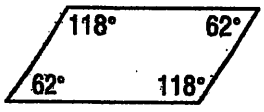
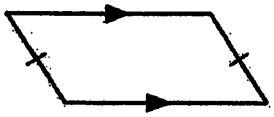


3.



4

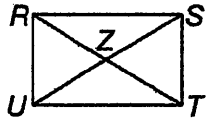


NAME _____ DATE _____ PERIOD _____ 3

6-4 Practice

Rectangles

ALGEBRA Quadrilateral *RSTU* is a rectangle.



1. If $UZ = x + 21$ and $ZS = 3x - 15$, find US.

2. If $RZ = 3x + 8$ and $ZS = 6x - 28$, find UZ.

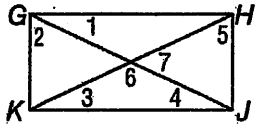
3. If $RT = 5x + 8$ and $RZ = 4x + 1$, find ZT.

4. If $m\angle SUT = 3x + 6$ and $m\angle RUS = 5x - 4$, find $m\angle SUT$.

5. If $m\angle SRT = x + 9$ and $m\angle UTR = 2x - 44$, find $m\angle UTR$.

6. If $m\angle RSU = x + 41$ and $m\angle TUS = 3x + 9$, find $m\angle RSU$.

Quadrilateral *GHJK* is a rectangle. Find each measure if $m\angle 1 = 37$.



7. $m\angle 2$

8. $m\angle 3$

9. $m\angle 4$

10. $m\angle 5$

11. $m\angle 6$

12. $m\angle 7$

Kuta Software - Infinite Geometry

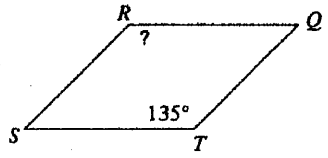
Name_____

Properties of Parallelograms

Date_____ Period____

Find the measurement indicated in each parallelogram.

1)



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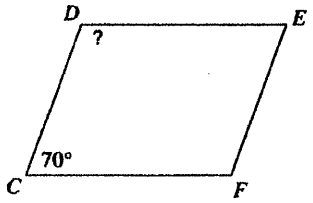
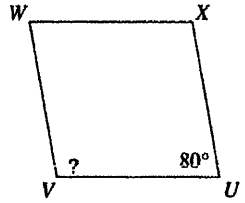


3)



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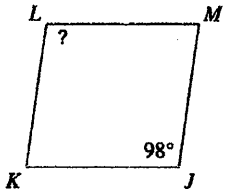

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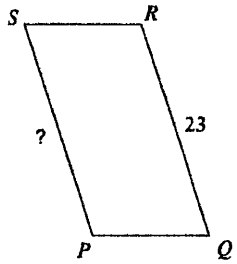

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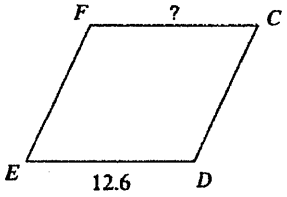
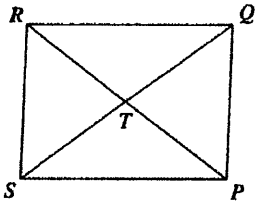
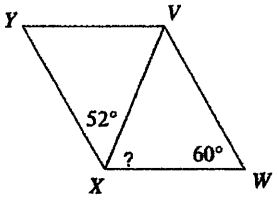


7) $RT = 19.8$
Find RP



8)



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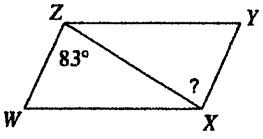

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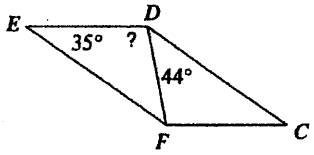


Geometry Quadrilaterals and Polygons Name_____ ID: 1

HW Quiz Review 1

Date_____ Period____

Find the other endpoint of the line segment with the given endpoint and midpoint.

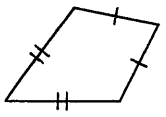
1) Endpoint: $(10, 5)$, midpoint: $(-5, 4)$

Find the distance between each pair of points. Round your answer to the nearest tenth, if necessary.

2) $(-6, 3)$, $(5, -6)$

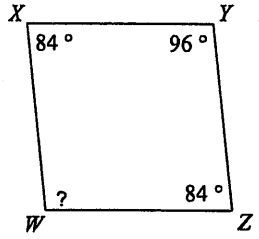
State the most specific name for each figure.

3)



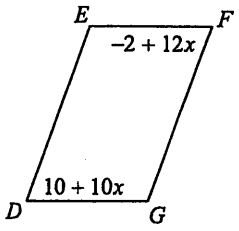
Find the measure of each angle indicated.

4)



Find the measurement indicated in each parallelogram.

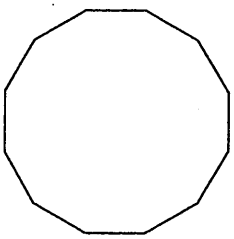
5) Find $m\angle D$



Formulas:	Distance: $d^2 = \Delta x^2 + \Delta y^2$ or $d^2 = (x_2 - x_1)^2 + (y_2 - y_1)^2$	Midpoint: $M\left(\frac{x_1+x_2}{2}, \frac{y_1+y_2}{2}\right)$
n is the number of sides	Sum of Interior Angles: $180(n - 2)$	Interior angle = $\frac{180(n-2)}{n}$
	Sum of Exterior Angle: $360°$	Exterior Angle: $\frac{360}{n}$

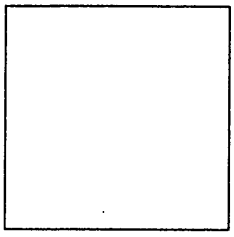
Find the measure of one interior angle in each polygon. Round your answer to the nearest tenth if necessary.

6)



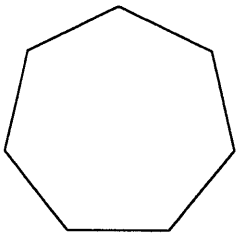
Find the measure of one exterior angle in each polygon. Round your answer to the nearest tenth if necessary.

7)



Find the interior angle sum for each polygon. Round your answer to the nearest tenth if necessary.

8)



Formulas:	Distance: $d^2 = \Delta x^2 + \Delta y^2$ or $d^2 = (x_2 - x_1)^2 + (y_2 - y_1)^2$	Midpoint: $M\left(\frac{x_1+x_2}{2}, \frac{y_1+y_2}{2}\right)$
n is the number of sides	Sum of Interior Angles: $180(n-2)$	Interior angle $= \frac{180(n-2)}{n}$
	Sum of Exterior Angle: 360°	Exterior Angle: $\frac{360}{n}$