

WarmUp:

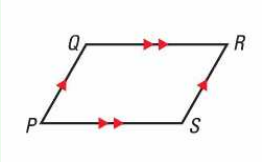
- Worksheet
- Put HW out on desk for check

We'll put a couple answers on the board for extra credit. #5,9,11,15,19,25,29

Dec 11-9:48 AM

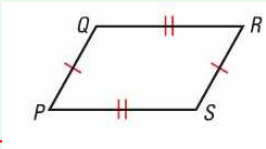
What is a Parallelogram? 1/7

A quadrilateral with both pairs of opposite sides Parallel.



Dec 2-8:49 AM

If a quadrilateral is a parallelogram, then its opposite sides are Congruent.

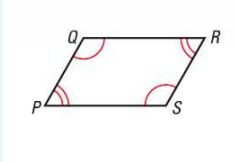


$\overline{QR} \cong \overline{SP}$   
 $\overline{QP} \cong \overline{SR}$

Dec 2-10:25 AM

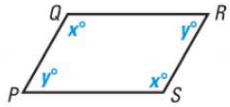
If a quadrilateral is a parallelogram, then its opposite angles are congruent.

$\angle Q \cong \angle S$   
 $\angle P \cong \angle R$



Dec 2-8:51 AM

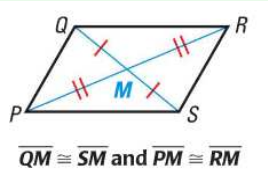
If PQRS is a parallelogram, then  $\angle x + \angle y = 180^\circ$



That is to say: If a quadrilateral is a parallelogram, then its consecutive angles are Supplementary

Dec 2-10:27 AM

If a quadrilateral is a parallelogram, then its diagonals bisect each other.



$\overline{QM} \cong \overline{SM}$  and  $\overline{PM} \cong \overline{RM}$

Dec 2-8:52 AM

**Example 1**

$GHIK$  is a parallelogram. Find the unknown length.

a.  $JH$  8      b.  $LH$  6

$L$   
bisector

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**Example 2**

In  $\square ABCD$ ,  $m\angle C = 105^\circ$ . Find the angle measure.

a.  $m\angle A$  105°      b.  $m\angle D$  75°

$\angle A + \angle D = 180^\circ$   
 $\angle D + \angle C = 180^\circ$   
 $\angle C + \angle B = 180^\circ$   
 $\angle A + \angle B = 180^\circ$

$\angle D + 105 = 180$   
 $\angle D = 75^\circ$

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**Example 3**

$WXYZ$  is a parallelogram. Find the value of  $x$ .

$\angle X \cong \angle Z$        $m\angle X = 4(27) - 9$   
 $4x - 9 = 3x + 18$        $m\angle X = 99^\circ$   
 $x = 27$

Dec 2-10:35 AM

Try These On Your Own:

$UVWX$  is a parallelogram.

- If  $XU = 15$  and  $UW = 28$ , find  $WZ$ . 14
- If  $m\angle VWX = 120^\circ$ , find  $m\angle WXU$ . 60°
- If  $m\angle UVW = 55^\circ$  and  $m\angle VWX = 7x - 8$ , find  $x$ .

$\angle V + \angle W = 180^\circ$   
 $55 + 7x - 8 = 180$   
 $47 + 7x = 180$   
 $7x = 133$   
 $x = 19$

$m\angle W = 7(19) - 8$   
 $= 125$

Dec 2-8:53 AM

Let's start a chart about quadrilaterals!!  
 --Hold on to this chart, we will use it through out the chapter!

**Parallelograms**

- Opposite sides are parallel
- Opposite sides are congruent
- Opposite angles are congruent
- Consecutive angles are supplementary
- Its diagonals bisect each other

Dec 2-8:52 AM

Tonight's Assignment:

Pg 372 1-20 all

Dec 2-10:47 AM