

Geometry CC – Mr. Valentino
 Unit 9 Lesson 2: Properties of Rectangles

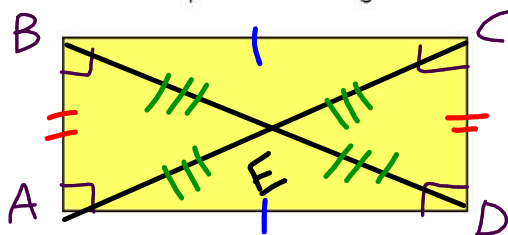
Name: _____
 Date: _____ Per: _____

Aim: What are rectangles? 

Do Now: List the 5 properties of a parallelogram:

1. Opposite sides are parallel
2. Opposite angles are congruent
3. Opposite sides are congruent
4. Consecutive angles are supplementary
5. Diagonals bisect each other

Properties of a Rectangle!



1. A rectangle has all the properties of a parallelogram
2. A rectangle has 4 right angles
3. The diagonals of a rectangle are congruent

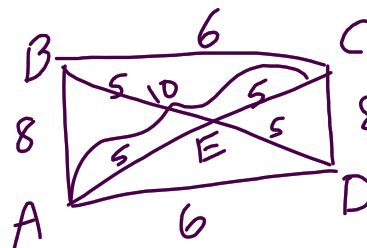
1. Circle the person who is correct.

Fred: "If you are a rectangle, then you can't be a parallelogram." X

George: "No, if you are a rectangle, then you are automatically a parallelogram." ✓

2. In rectangle $ABCD$, the diagonals meet at E . $CB = 6$, $AB = 8$, and $AC = 10$. Find the missing lengths:

- a] $AD = \underline{6}$ b] $CD = \underline{8}$ c] $EC = \underline{5}$ d] $AE = \underline{5}$
 e] $DE = \underline{5}$ f] $EB = \underline{5}$ g] $DB = \underline{10}$



3. In rectangle $PQRS$, diagonals \overline{PR} and \overline{QS} meet at T . If $PT = 4$, find the lengths of each of the following:

a) \overline{TR}

c) \overline{PR}

b) \overline{TQ}

d) \overline{QS}

4. In parallelogram $ABCD$, diagonals \overline{AC} and \overline{BD} are drawn. $AE = 7x - 1$, and $EC = 5x + 5$.

a) Find x

$x = 3$

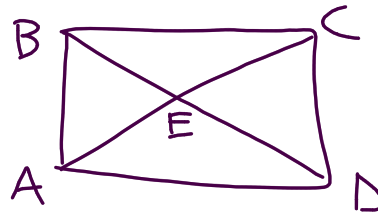
b) Find AC

c) If $\overline{DB} = 10x + 10$, find \overline{DB} .

$10(3) + 10 = 40$

d) What kind of parallelogram is $ABCD$? Why?

rectangle

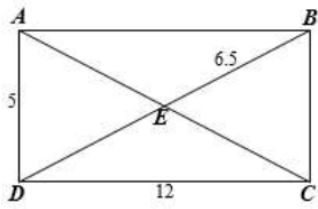


5. In rectangle $ABCD$, $AC = 6x - 2$, and $BD = 4x + 2$.

a) Find x .

b) Find AC and BD .

6. In each rectangle, find the indicated lengths.

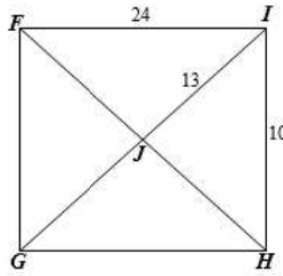


AB =

BC =

DE =

AC =

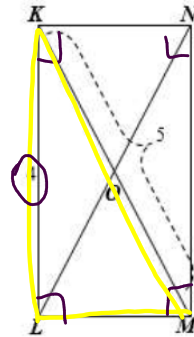


FH =

JH =

GH =

FG =

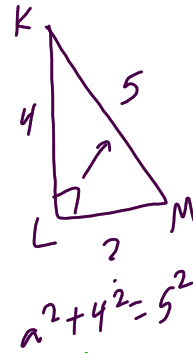


LN =

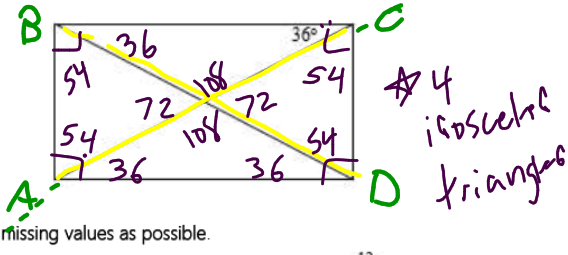
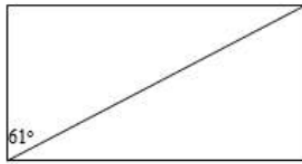
NM =

ON =

LM = 3



7. In each rectangle, fill in as many missing angle measures as possible.



8. Each diagram below shows a rectangle. Fill in as many missing values as possible.

