Geometry CC – Mr. Valentino

Name: _____

Unit 9 Lesson 2: Properties of Rectangles

Date: _____ Per: _____

Aim: What are rectangles? 

Do Now: List the 5 properties of a parallelogram:

1. _____

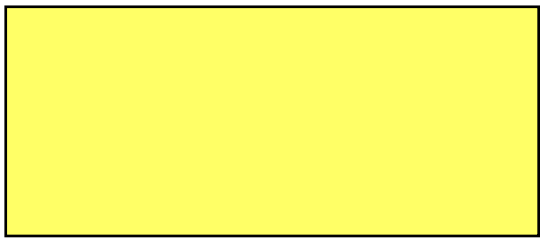
2. _____

3. _____

4. _____

5. _____

Properties of a Rectangle!



1. A rectangle has all the properties of a _____

2. A rectangle has _____

3. The diagonals of a rectangle are _____

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1. Circle the person who is correct.

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

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* = _____ b] *CD* = _____ c] *EC* = _____ d] *AE*= _____

e] *DE* = _____ f] *EB*= _____ g] *DB*= _____

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 $\overline{AEC}$ and $\overline{DEB}$ are drawn. $AE = 7x - 1$, and $EC = 5x + 5$.

a] Find *x*

b] Find *AC*

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

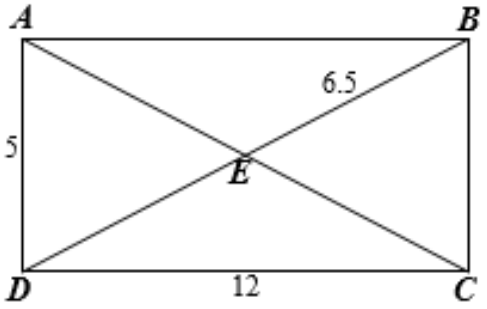
d] What kind of parallelogram is *ABCD*? Why?

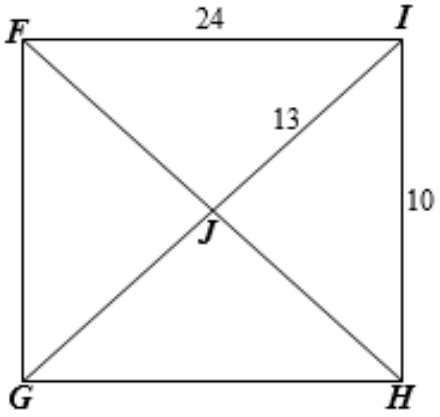
5. In rectangle *ABCD*, $AC = 6x - 2$, and $BD = 4x + 2$.

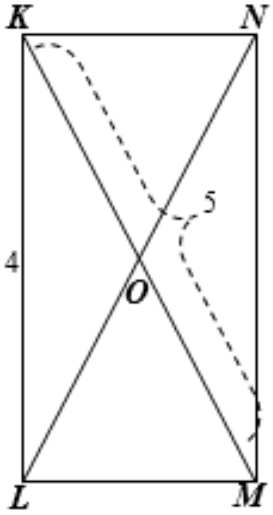
a] Find *x*.

b] Find *AC* and *BD*.

6. In each rectangle, find the indicated lengths.







AB =

BC =

DE =

AC =

FH =

JH =

GH =

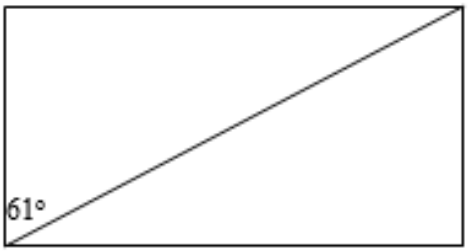
FG =

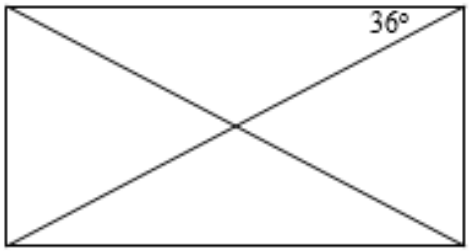
NM =

ON =

LM =

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.