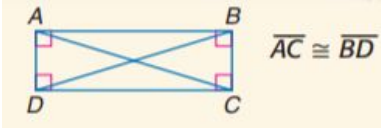


Rectangle:

6.13	If a parallelogram is a rectangle then the diagonals are congruent	
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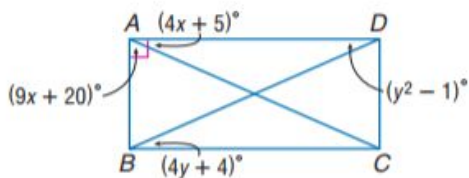
If a quadrilateral is a rectangle the following properties are true:

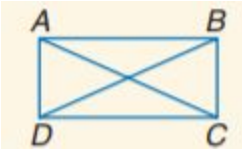
- | | |
|----|----|
| 1. | 4. |
| 2. | 5. |
| 3. | 6. |

1. Quadrilateral MNOP is a billboard in the shape of a rectangle. If $MO = 6x + 14$ and $PN = 9x + 5$, find x . Then find NR .



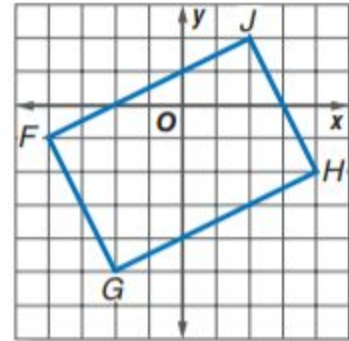
2. Quadrilateral ABCD is a rectangle. Solve for the missing variables.



6.14	If the diagonals of a parallelogram are congruent, then the parallelogram is a rectangle.	
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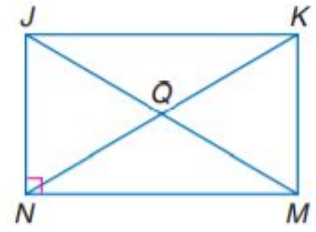
3. Quadrilateral $FGHJ$ has vertices $F(-4, -1)$, $G(-2, -5)$, $H(4, -2)$, $J(2, 2)$. Determine whether $FGHJ$ is a rectangle.

Method 1: Show the opposite sides are _____



Method 2: Show that the diagonals are _____

4. Quadrilateral JKMN is a rectangle:
a. If $JQ = 5x - 3$ and $QM = 4x + 6$, find JM



- b. If $NQ = 2x + 3$ and $QK = 5x - 9$, find NK
- c. If $NM = x + 1$ and $JK = x^2 - 5$, find JK
- d. If $m\angle NJM = 2x - 3$ and $m\angle KJM = x + 5$, find x

e. If $m\angle NKM = x^2 + 4$ and $m\angle KNM = x + 30$, find $m\angle JKN$

f. If $m\angle JKN = 2x^2 + 2$ and $m\angle NKM = 14x$, find x .

5. WXYZ is a rectangle. Find each measure if $m\angle 1 = 30$.

a. $m\angle 2$

d. $m\angle 5$

g. $m\angle 8$

b. $m\angle 3$

e. $m\angle 6$

h. $m\angle 9$

c. $m\angle 4$

f. $m\angle 7$

i. $m\angle 12$

