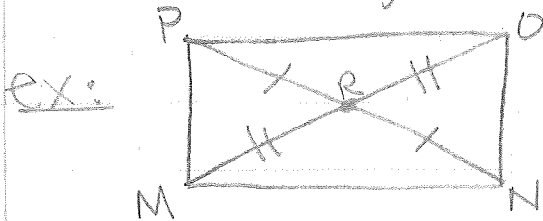


## 6-4 Rectangles



MNOP is a rectangle

$$MO = 6x + 14$$

$$PN = 9x + 5$$

Find  $x$  and  $NR$ .

$$MO = PN$$

$$6x + 14 = 9x + 5$$

$$-6x \quad -5 \quad -6x \quad -5$$

$$\frac{9}{3} = \frac{3x}{3}$$

$$\boxed{x = 3}$$

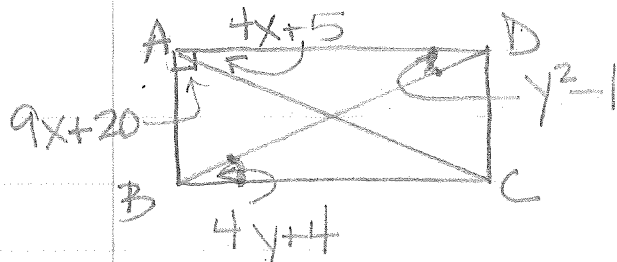
$$PN = 9(3) + 5$$

$$PN = 27 + 5 = 32$$

$$NR = \frac{32}{2}$$

$$\boxed{NR = 16}$$

ex: Quad. ABCD is a rectangle.  
Find  $x$  and  $y$ .



$$4x + 5 + 9x + 20 = 90$$

$$13x + 25 = 90$$

$$13x = 65$$

$$\boxed{x = 5}$$

$$y^2 - 1 = 4y + 4$$

$$-4y - 4 \quad -4y - 4$$

$$y^2 - 4y - 5 = 0$$

$$\begin{array}{r} -5y^2 \\ -5y \quad + \quad 1y \\ \hline -4y \end{array}$$

$$(y-5)(y+1) = 0$$

$$y-5=0 \quad y+1=0$$

$$\boxed{y = 5}$$

$$\cancel{y = -1}$$

test:  $4(-1) + 4$

$$-4 + 4 = 0$$