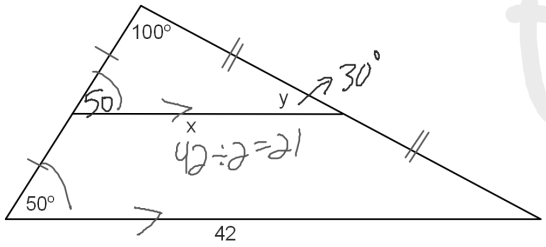
Theorem 5-1 **Triangle Midsegment Theorem**

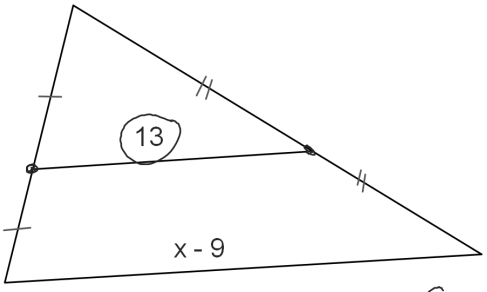
If a segment joins the midpoints of two sides of a triangle, then the segment is parallel to the third side, and is half its length.



x=21

y=30°

Find the value of x.



$13 \cdot 2 = X - 9$

$26 = X - 9$

$+9 \quad +9$

$35 = X$

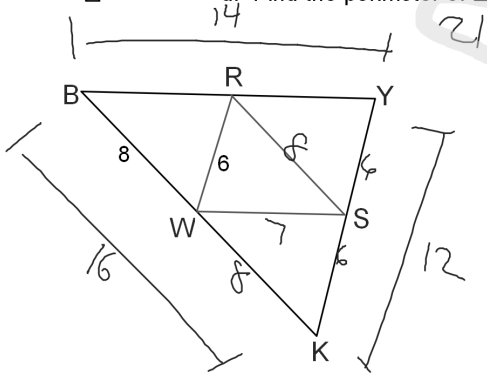
Points R, S, and W are midpoints and BY = 14

a. $\overline{RW} \parallel \overline{YK}$

b. $\overline{BK} \parallel \overline{RS}$

c. Find the perimeter of ΔBKY

d. Find the perimeter of ΔRWS



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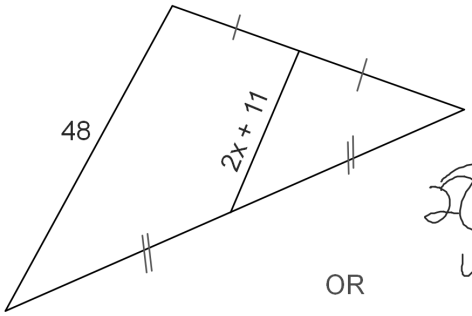
21

Find the value of x.



$2(2x+11) = 48$

$4x + 22 = 48$

OR

$24 = 2x + 11$

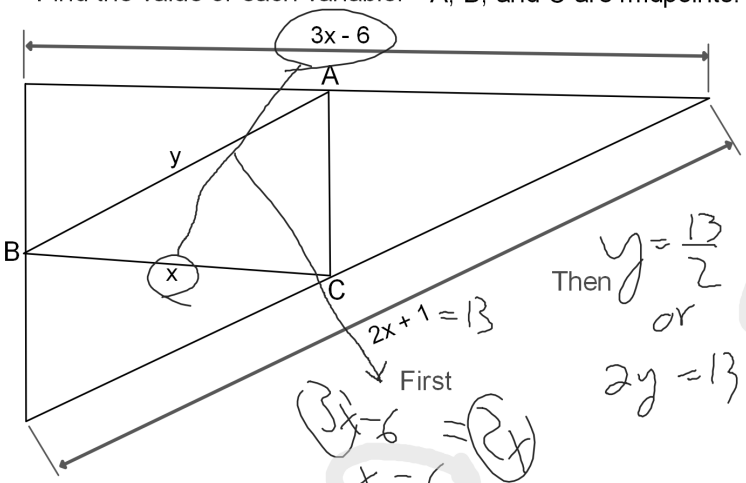
$13 = 2x$

$6.5 = x$

$4x = 26$

$x = 6.5$

Find the value of each variable. A, B, and C are midpoints.



$(3x - 6) = (2x)$

$x = 6$

Then $y = \frac{13}{2}$

or

$2y = 13$

$y = 6.5$