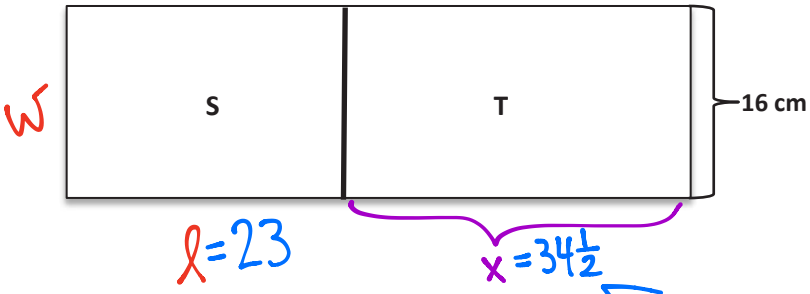
Name _____ Date _____

1. In the diagram, the length of Figure S is $\frac{2}{3}$ the length of Figure T. If S has an area of 368 $cm^2$, find the perimeter of the figure.




w

$l = 23$

$x = 34\frac{1}{2}$

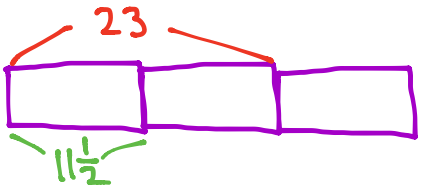
Area of S:

$A = l \cdot w$

$368 = l \cdot 16$

$23 = l$

23 is $\frac{2}{3}$ of x




2 units = 23

1 unit = $11\frac{1}{2}$

$x = 11\frac{1}{2} \times 3 = 34\frac{1}{2}$

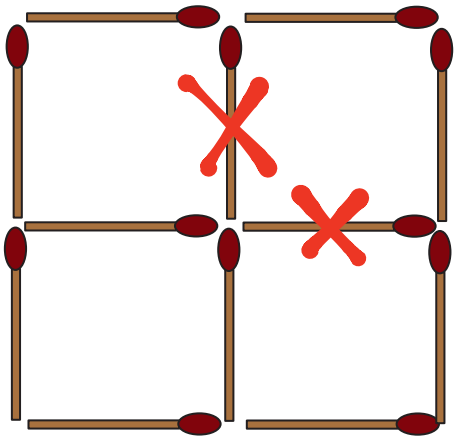
Perimeter = $23 + 23 + 34\frac{1}{2} + 34\frac{1}{2} + 16 + 16$

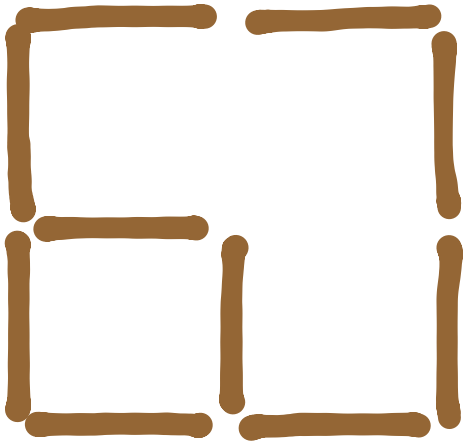
$46 + 69 + 32$

Perimeter = 147 cm

The following problems are puzzles for your enjoyment. They are intended to encourage working together and family problem-solving fun and are not a required element of this homework assignment.

2. Take 12 matchsticks arranged in a grid as shown below, and remove 2 matchsticks so 2 squares remain. How can you do this? Draw the new arrangement.





(other solutions may be possible.)

3. Moving only 3 matchsticks makes the fish turn around and swim the opposite way. Which matchsticks did you move? Draw the new shape.

(other solutions may be possible.)