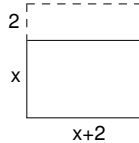


Name: \_\_\_\_\_

Date: \_\_\_\_\_

1.  $\frac{81}{4} = 20.25 \text{ cm}^2$

2. The information tells us that the rectangle had width  $x$  and length  $x + 2$  as shown below.



We then get the following equation from the areas of the quadrilaterals:

$$\begin{aligned}(x + 2)^2 &= 16 + x(x + 2) \\ x^2 + 4x + 4 &= 16 + x^2 + 2x \\ 2x &= 12 \\ x &= 6\end{aligned}$$

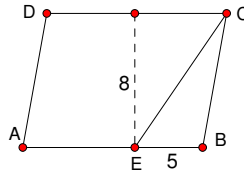
So now we know the dimensions of the original rectangle to be  $6 \times 8$  and its area to be  $48 \text{ cm}^2$ .

3.  $25 \text{ cm}^2$

4.  $40 \text{ cm}^2$

5.  $10 \text{ cm}^2$

6. Since the area of the parallelogram is  $(AB)(h) = 96 \text{ cm}$ , and we know  $h = 8 \text{ cm}$ , then  $AB = 12 \text{ cm}$ .  $AE = 12 - 5 = 7 \text{ cm}$  and since  $DC = AB = 12 \text{ cm}$ , we get the area of trapezoid  $AECD = \frac{12+7}{2} \cdot 8 = 76 \text{ cm}^2$ .



7.  $16 \text{ m}^2$

8.  $24 \text{ cm}^2$

9. Free

10.  $36 \text{ cm}^2$