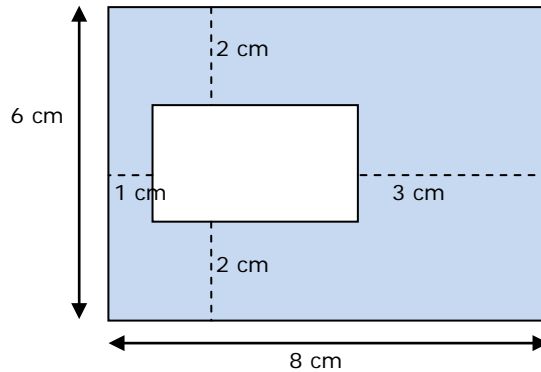


Area and Perimeter Critical Thinking Problems – Meet the Skill

Name _____

Date _____

Find the area of the shaded figure and perimeter of larger rectangle.



The above figure consists of two rectangles, a small one and a large one with the small one placed inside the large one.

Now the area of the shaded region needs to be calculated.

To do that, we take the following steps:

- Find area of larger rectangle
- Find area of smaller rectangle
- Subtract area of smaller rectangle from large rectangle

The formula to calculate the area of rectangle is length X width that is multiplication of measure of two sides each from pair of parallel sides

So area of larger rectangle = $6 \text{ cm} \times 8 \text{ cm} = 48 \text{ cm}^2$

The sides of the inner rectangle can be obtained by subtracting the distance of the inner rectangle with respect to the large rectangle from the respective sides of larger rectangle.

The longer side of inner rectangle = $8 \text{ cm} - (1 \text{ cm} + 3 \text{ cm}) = 4 \text{ cm}$

Shorter side = $6 \text{ cm} - (2 \text{ cm} + 2 \text{ cm}) = 2 \text{ cm}$

Hence the area of inner rectangle equals $2 \text{ cm} \times 4 \text{ cm} = 8 \text{ cm}^2$

Area of shaded region = $(48 \text{ cm}^2 - 8 \text{ cm}^2) = 40 \text{ cm}^2$

Now perimeter is given by $2(\text{length} + \text{width}) = 2(8 \text{ cm} + 6 \text{ cm}) = 28 \text{ cm}$

Answer: 40 cm^2 and 28 cm