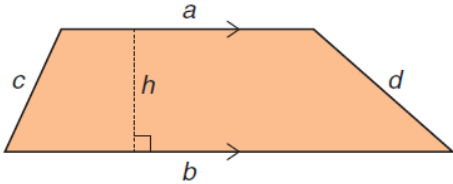
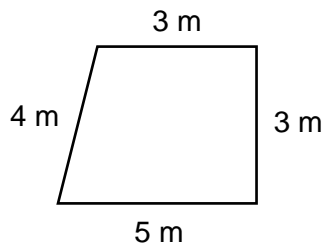


Perimeter and Area of a Trapezoid

<p>Trapezoid</p> 	<p>Perimeter: $P = a + b + c + d$</p> <p>Area: $\frac{1}{2}$ (sum of parallel sides) \times height or, $A = \frac{1}{2}(a + b)h$</p>
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1. Determine the perimeter of each given trapezoid.

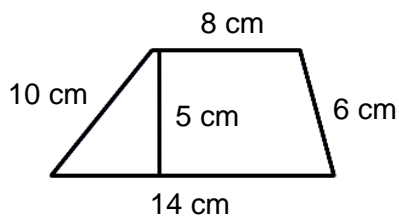
(a)



$$\begin{aligned} \text{Perimeter} &= a + b + c + d \\ &= 3 + 5 + 4 + 3 \\ &= 15 \end{aligned}$$

The perimeter is 15 m.

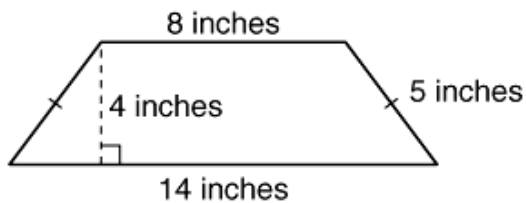
(b)



$$\begin{aligned} \text{Perimeter} &= a + b + c + d \\ &= 8 + 14 + 10 + 6 \\ &= 38 \end{aligned}$$

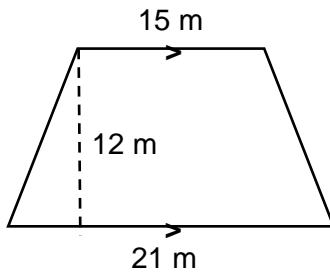
The perimeter is 38 cm.

(c)



2. Determine the area of each given trapezoid.**Note:** Height, h , is a vertical line perpendicular to the bases of a trapezoid.

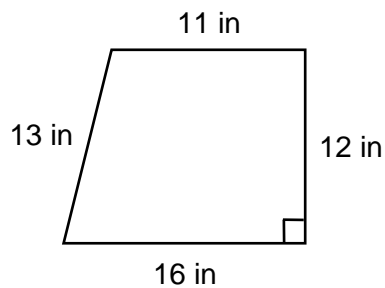
(a)



$$\begin{aligned} \text{Area} &= \frac{1}{2}(a + b)h \\ &= \frac{1}{2}(15 + 21)(12) \\ &= \frac{1}{2}(36)(12) \\ &= 216 \end{aligned}$$

The area is 216 m^2 .

(b)

**3. Determine the area and perimeter of the given trapezoid.**