

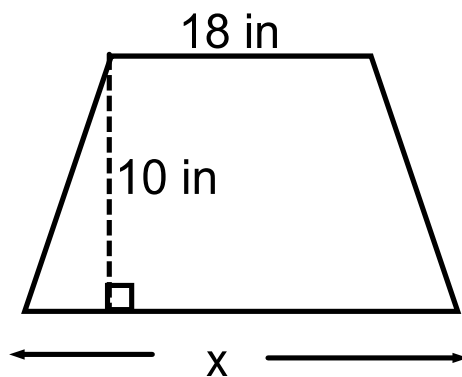
Notes for page 1.10

Ex. 1: The bases of a trapezoid are 12 and 18 cm and its area is 300 cm^2 . Find the height.

$$\begin{aligned} A &= \frac{1}{2}h(b_1 + b_2) \\ 300 &= \frac{1}{2}(h)(12 + 18) \\ 300 &= \frac{1}{2}(h)(30) \\ \frac{300}{15} &= \frac{15h}{15} \end{aligned}$$

$h = 20 \text{ cm}$

Ex. 2: Find x if the area is 250 in^2 .



$$\begin{aligned} A &= \frac{1}{2}h(b_1 + b_2) \\ 250 &= \frac{1}{2}(10)(18 + x) \\ 250 &= 5(18 + x) \\ 250 &= 90 + 5x \\ -90 \quad -90 \\ \hline 160 &= 5x \\ \frac{160}{5} &= \frac{5x}{5} \\ 32 &= x \end{aligned}$$

$x = 32 \text{ in}$