

Before we begin, are there any questions from last day's work?

6.1.2, 6.1.3 5-8, 12-16, 19, 20, 22

Today's Learning Goal(s):

By the end of the class, I will be able to:

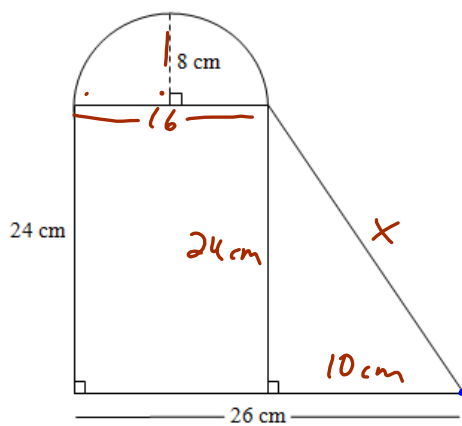
a) calculate the perimeter and area of any 2-dimensional figure.

Today's work: 6.2.1 6cd, 8abd(ef), 9,10,(11)

6.2.2 (Formula Sheet)

6.2.1 Area of 2D Geometric Figures
(including composite figures)Date: May 17/18

- Ex. 1 a) Calculate the perimeter of the figure.
b) Calculate the area of the figure. (use the same diagram on the next slide)



$$\begin{aligned}
 P &= 26 + 24 + \text{arc} + x \\
 &= 26 + 24 + 25.133 + 26 \\
 &= 101.133 \text{ cm}
 \end{aligned}$$

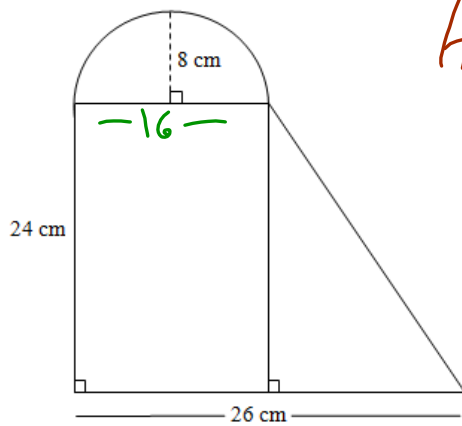
arc: Half-Circle

$$\begin{aligned}
 C &= \frac{2\pi r}{2} & C &= \frac{1}{2}(2\pi r) \\
 &= \frac{2\pi(8)}{2} \\
 &= 25.1327 \\
 &= 25.133
 \end{aligned}$$

$$\begin{aligned}
 x^2 &= 24^2 + 10^2 \\
 &= 576 + 100 \\
 &= 676 \\
 x &= \sqrt{676} \\
 &= 26
 \end{aligned}$$



b) Calculate the area of the figure.



$$\begin{aligned}
 A &= \frac{1}{2}(\pi r^2) \\
 &= \frac{1}{2}\pi(8)^2 \\
 &\approx 100.5309 \\
 &\approx 100.531
 \end{aligned}$$

$$\begin{aligned}
 A_{\text{figure}} &= \frac{1}{2}\text{Circle} + \text{Trapezoid} \\
 &\approx 100.531 + 504 \\
 &= 604.531 \text{ cm}^2
 \end{aligned}$$

604.531 cm²



$$\begin{aligned}
 A_{\text{Trap}} &= \frac{1}{2}h(a+b) \\
 &= \frac{1}{2}(24)(16+26) \\
 &= \frac{1}{2}(24)(42) \\
 &= 504
 \end{aligned}$$