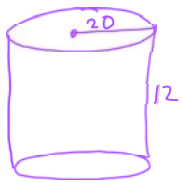# Examples

Use Calculator π.   Round to nearest tenth.

1. Find the volume and surface area of a cylinder with diameter of 40 cm and a height of 12 cm.
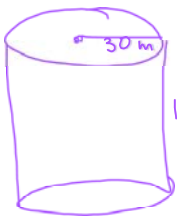
$B = $ area of base
$= \pi r^2 = \pi \cdot 20^2 = 400\pi$

$LA = C \cdot h = \pi \cdot d \cdot h$
$= \pi \cdot 40 \cdot 12 = 480\pi$

lateral area

$V = B \cdot h = 400\pi \cdot 12 = 4800\pi$

$V \approx 15,079.6 \, cm^3$

$SA = 2B + LA$
$= 2(400\pi) + 480\pi$
$= 800\pi + 480\pi = 1280\pi \approx \boxed{4021.2 \, cm^2}$

2. Find the volume and surface area of a cylinder with radius of 30 m and a height of 10 m.

$B = \pi r^2 = \pi \cdot 30^2 = 900\pi$

$LA = C \cdot h = \pi \cdot d \cdot h = \pi \cdot 30 \cdot 10 = 300\pi$

$V = B \cdot h = 900\pi \cdot 10$
$= 9000\pi \approx \boxed{28274.3 \, m^3}$

$SA = 2B + LA$
$= 2(900\pi) + 300\pi$
$= 1800\pi + 300\pi$
$= 2100\pi \approx \boxed{6597.3 \, m^2}$