2-26-18 5th Geo

① How much water will a cylinder hold if it is 15 cm tall and has a diameter of 8 cm?

$V = \pi r^2 \cdot h$

πr^2: area of bottom; h: # of layers

$V = \pi \cdot 4^2 \cdot 15$

$= 240\pi$

$\approx 754 \text{ cm}^3$

② What is the surface area of a sphere with a radius of 6 cm?

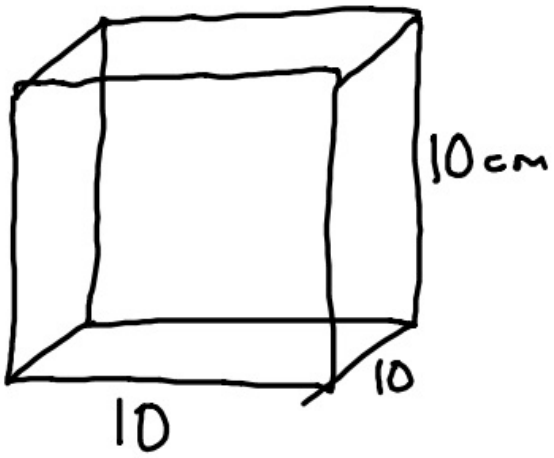
$S.A. = 4\pi r^2$

$= 4 \cdot \pi \cdot 6^2$

$= 144\pi$

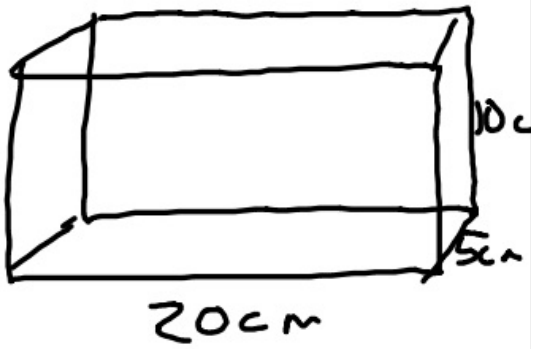
$\approx 452.4 \text{ cm}^2$

(3)



Volume = 1000 cm^3

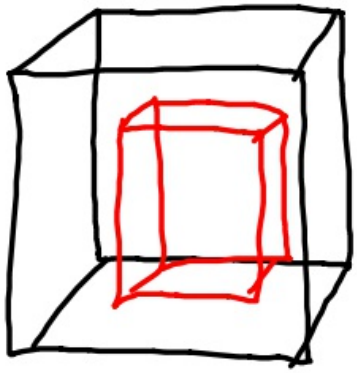
S.A. = 600 cm^2



Volume = 1000 cm^3

S.A. = 700 cm^2

(4) Someone put a 4cm cube inside my 6cm cube. If I fill the 6cm cube with water, how much will it hold?

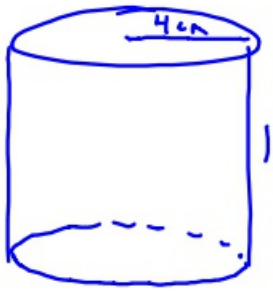


$6^3 - 4^3$

$216 - 64 = 152\ cm^3$

2-26-18 6th Geo

① How much water will a cylinder hold if it is 12 cm tall and has a diameter of 8 cm?



$V = \pi r^2 \cdot h$

πr^2 ↑ Area of base

h ↑ layers there are

$V = \pi \cdot 4^2 \cdot 12$

$= 192\pi$

$\approx 603.2 \text{ cm}^3$

② What is the surface area of a sphere that has a radius of 10 cm?

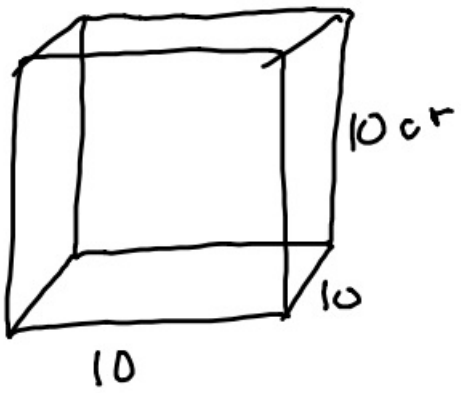
$S.A. = 4\pi r^2$

$= 4 \cdot \pi \cdot 10^2$

$= 400\pi$

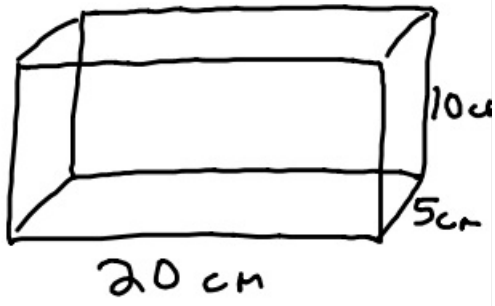
$\approx 1256.6 \text{ cm}^2$

(3)



Volume = 1000 cm^3

S.A. = 600 cm^2



Volume = 1000 cm^3

S.A. = 700 cm^2

(4) In my glass I pour H_2O. My glass is 3cm wide(radius) and 10 cm tall. I put 5 ice cubes in it that are cubes with side length of 3cm. How much water will fit in the glass?

$V = \pi r^2 h$

$= \pi \cdot 3^2 \cdot 10$

$= 90\pi$

≈ 282.7

$\rightarrow 27\ cm^3$

$\times\ 5$

$135\ cm^3$

$\approx 282.7 - 135$

$\approx 147.7\ cm^3$