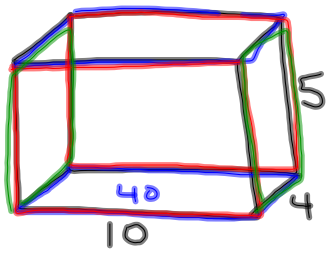
4-7-14

5th Geo

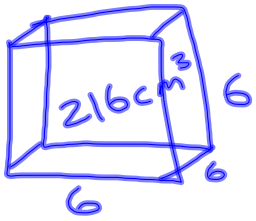
Give surface area of this prism



40
40
50
50
20
20

$220\ cm^2$

A sphere with a diameter of 6 cm is put inside a box where it touches the edges of all 6 faces. How much room is left in the box?



$V = \frac{4}{3}\pi \cdot 3^3$

$= 36\pi$

Space left

$=$

$216 - 36\pi$

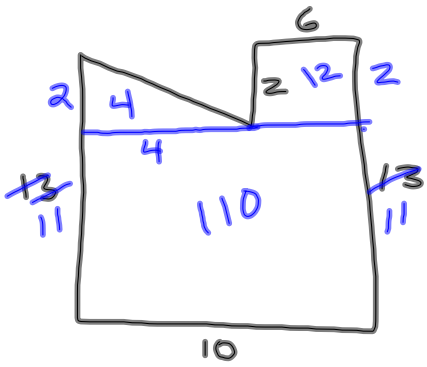
$\approx 102.9\ cm^3$

From Ch. 10 PT 2

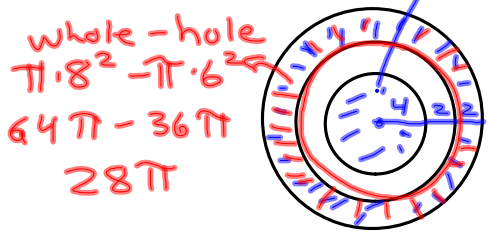
(15)

From Ch. 10 PT 2

(15)

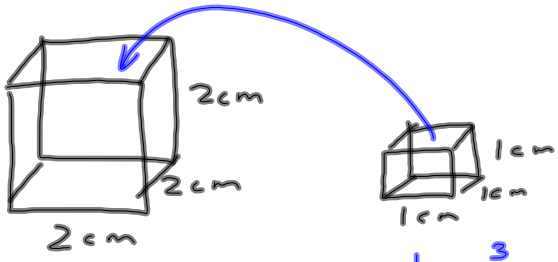


110
12
4
126 cm²



28π + 16π
44π

(7)

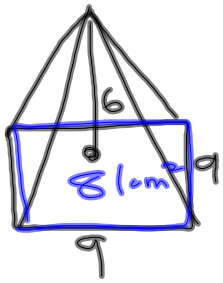


V = 2·2·2
= 8 cm³

1 cm³

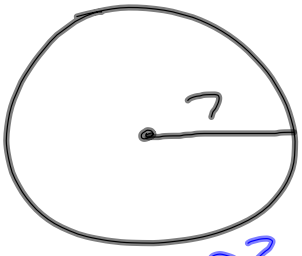
7 cm³

(3)



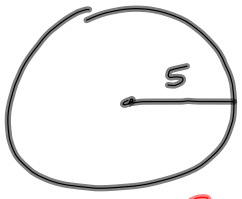
V = ⅓ B h
= ⅓ · 81 · 6
162 cm³

⑤



$A = \pi \cdot 7^2$

$= 49\pi$



$A = \pi r^2$

$= \pi \cdot 5^2$

$= 25\pi$

$49\pi - 25\pi$

$= 24\pi$

New practice

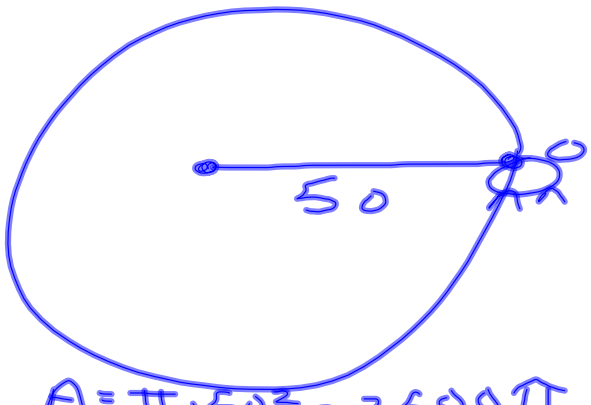
① What is the surface area of a sphere with a radius of 8 cm?

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

$= 4\pi \cdot 8^2$

$\approx 804.2\ cm^2$

② A dog is tied to a 50 ft. rope. How much area does it have to walk around in?



$A = \pi \cdot 50^2 = 2500\pi$

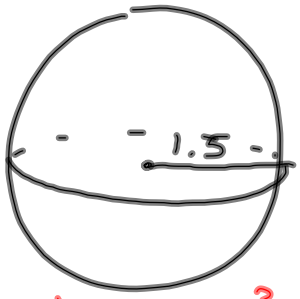
$\approx 7854\ ft^2$

4-7-14
6th Geo

(8)

$V = \frac{4}{3}\pi r^3$

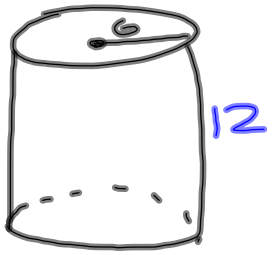
$\frac{4}{3}\pi \cdot 3^3$



$V = \frac{4}{3}\pi r^3$

$\frac{4}{3} \cdot \pi \cdot 1.5^3$

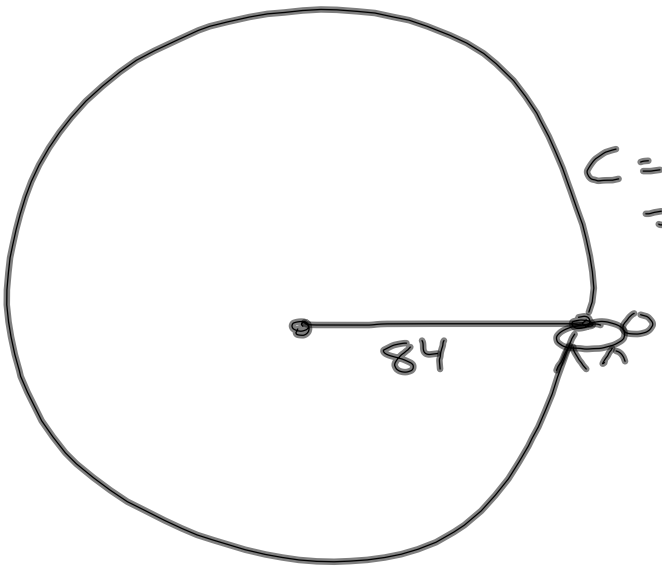
(4)



$S.A. = 2\pi r^2 + 2\pi r h$

$2 \cdot \pi \cdot 6^2 + 2\pi 6 \cdot 12$

(10)



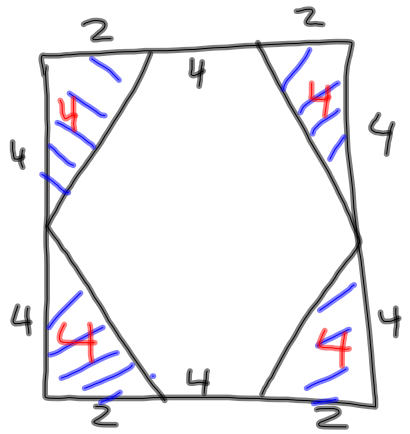
$C = \pi \cdot d$

$= \pi \cdot 168$

≈ 527.8 ft

$\frac{5,280}{527.8} = 10$ laps

(16)



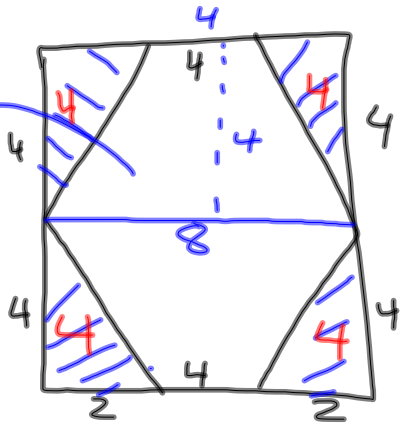
16

(16)

$\frac{1}{2}4(8+4)$

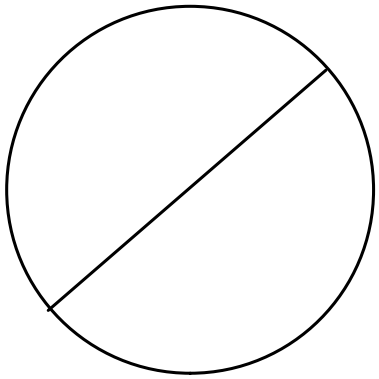
$\frac{1}{2} \cdot 4 \cdot 12$

24



16

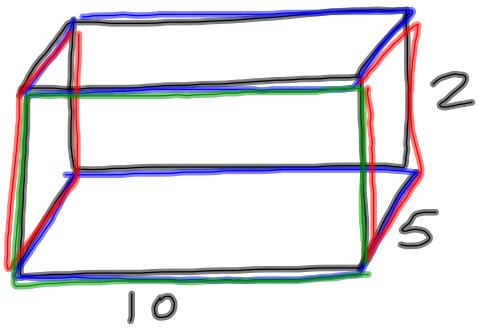
(18)



$C = 377\,cm$ $D = ?$

$C = \pi \cdot d$

$\frac{377}{\pi} = \frac{\pi \cdot d}{\pi}$

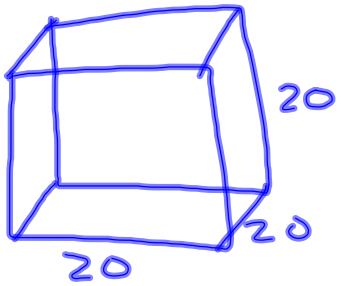


What is this prism's surface area?

$50 + 10 + 20$
$50 + 10 + 20$

$160\ cm^2$

A sphere with a diameter of 20 cm is put in a box where the sphere touches all 6 faces. How much volume is left in the cube?

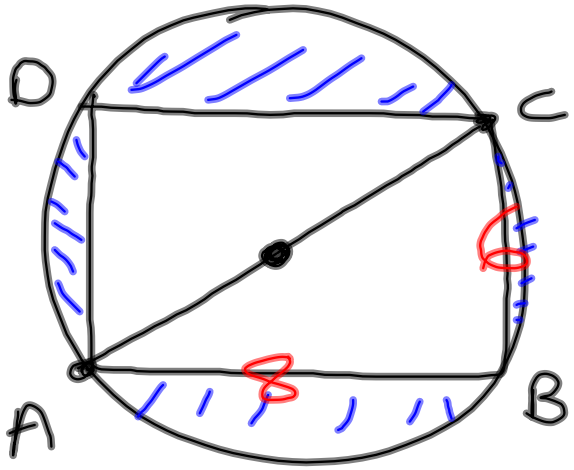


$V = 20 \cdot 20 \cdot 20$
$= 8000\ cm^3$

$V = \frac{4}{3}\pi \cdot r^3$
$\frac{4}{3}\pi \cdot 10^3$
$\approx 4188\ cm^3$

8000
$-\ 4188$
$\approx 3812\ cm^3$

Find area of shaded region



AC is diameter of circle.

AC = 10

AD = 6

AB = 8

Whole - hole

$\pi r^2 - l \cdot w$

$\pi \cdot 5^2 - 8 \cdot 6$

$25\pi - 48$

$\approx 30.5 \text{ cm}^2$