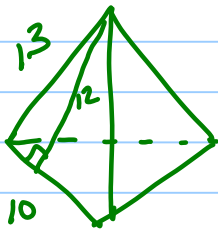


Review Chapter 12 (pp 595-597)

Note Title

4/26/2005

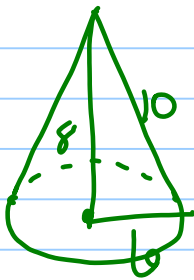
10) a)



$$LA = 3\left(\frac{1}{2} \cdot 10 \cdot 12\right)$$

$$SA = 180 + \frac{10^2\sqrt{3}}{4}$$

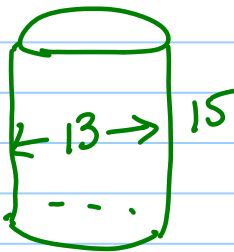
b)



$$LA = \pi r l$$
$$= \pi \cdot 6 \cdot 10$$

$$SA = 60\pi + \pi r^2$$
$$= 60\pi + \pi 36$$

c)



$$LA = 2\pi r h$$
$$= 2\pi \left(\frac{13}{2}\right) (15)$$

$$SA = 195\pi + 2\pi r^2$$
$$= 195\pi + 2\pi \left(\frac{13}{2}\right)^2$$

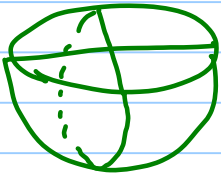
$$= 195\pi + 2\pi \frac{169}{4}$$

$$= 195\pi + \frac{169\pi}{2}$$

$$= \frac{390\pi}{2} + \frac{169\pi}{2} =$$

11) $\overline{\quad 10 \quad}$

(a)

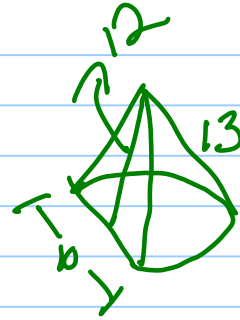


$$SA = \frac{1}{2}(4\pi r^2) + \pi r^2$$

$$= 3\pi r^2$$

$$= 3\pi(25)$$

(b)

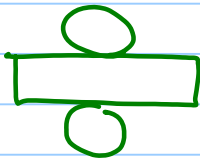


$$SA = \frac{1}{2}\pi r l + \frac{1}{2}\pi r^2 + \frac{1}{2}(10)(h)$$

$$SA = \frac{1}{2}\pi(5)(13) + \frac{1}{2}\pi(25) + \frac{1}{2}(10)(12)$$

$$SA = \frac{65\pi}{2} + \frac{25\pi}{2} + 60$$

12)



$$A = 16\pi$$

$$r = 4$$

$$LA = 24\pi$$

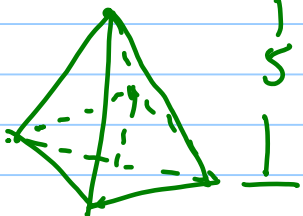
$$24\pi = 2\pi(4)h$$

$$3 = h$$

$$V = (16\pi)(3)$$

$$V = 48\pi$$

13)



$$V = \frac{1}{3}Bh$$

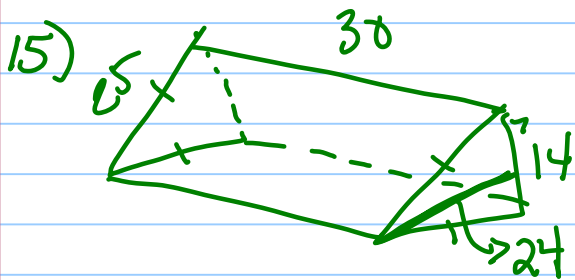
$$V = \frac{1}{3}\left(\frac{1}{2} \cdot 7 \cdot 7\right)(5)$$

$$V = 35$$

$$14) V = Bh$$

$$SA = \overbrace{6(12)(20)}^{LA} + 2\left(\frac{6 \cdot 12^2\sqrt{3}}{4}\right)$$

$$V = \left(6 \cdot \frac{12^2\sqrt{3}}{4}\right)(20)$$



$$V = Bh$$

$$V = \frac{1}{2}(14)(24)(30)$$

$$V = 5040$$

16) Volume of Towers

Volume of center

* 459

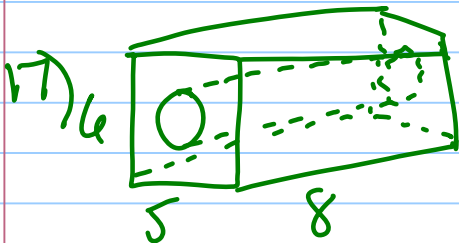
150,000

→ * 468π

* $\frac{459\sqrt{3}}{4}$

$$V = 150,459 + 927\pi + \frac{459\sqrt{3}}{4}$$

→ * 459π



$d=2$

$$V = lwh - \pi r^2 h$$

$$V = 6 \cdot 5 \cdot 8 - \pi(1)(8)$$

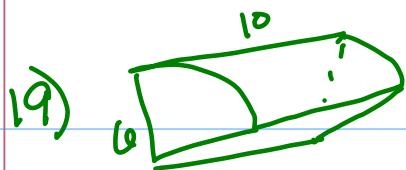
18) $V = Bh$

$$\frac{\sqrt{10(5)(4)(1)}}{25 \cdot 5 \cdot 2 \cdot 2}$$

$$V = 10\sqrt{2}(7)$$

$$10\sqrt{2}$$

$$V = 70\sqrt{2}$$



side rectangles

$$SA = 2 \cdot \frac{1}{4}(\pi r^2) + \frac{1}{4}(2\pi r h) + 2 \cdot r h$$

$$SA = \frac{1}{2}(36\pi) + \frac{1}{2}(60\pi) + 2(60)$$

$$SA = 18\pi + 30\pi + 120$$



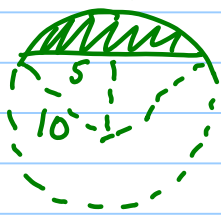
20)



NOT a Hemisphere!!

$$V = Bh$$

$$V = \left(\frac{50\pi}{3} - 25\sqrt{3}\right)(30)$$



$$B = \frac{1}{6}(100\pi) - \frac{10^2\sqrt{3}}{4}$$

$$= \frac{50\pi}{3} - 25\sqrt{3}$$



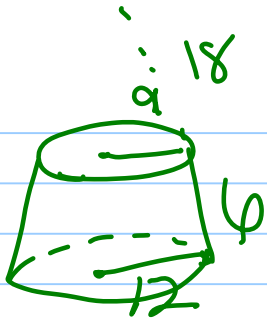
$$SA = 2B + \frac{1}{6}(2\pi r h) + (10)(30)$$

$$= 2\left(\frac{50\pi}{3} - 25\sqrt{3}\right) + \frac{1}{3}\pi(10)(30) + 300$$

$$= \frac{100\pi}{3} - 50\sqrt{3} + 100\pi + 300$$



21)



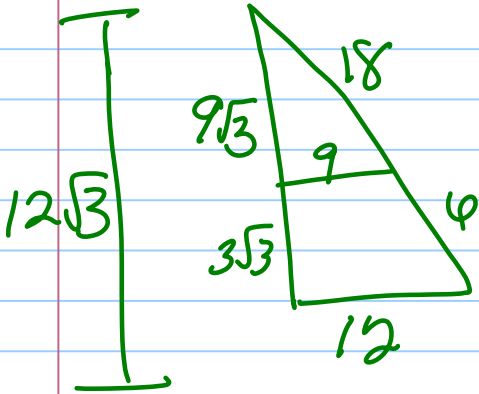
$$\frac{9}{12} = \frac{x}{x+h} \quad \text{or} \quad \frac{3}{4} = \frac{x}{x+h}$$

$$3x+18=4x$$

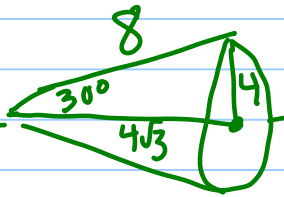
$$18=x$$

$$V = \frac{1}{3} (144\pi) (12\sqrt{3}) - \frac{1}{3} (81\pi) (9\sqrt{3})$$

$$V = 576\pi\sqrt{3} - 243\pi\sqrt{3}$$



22) a)

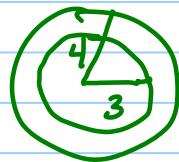


$$V = \frac{1}{3} B h$$

$$V = \frac{1}{3} (16\pi) (4\sqrt{3})$$

~~$$V = \frac{16\pi \cdot 4\sqrt{3}}{3}$$~~

b) Hollow Cylinder



Height = 5

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

$$= \pi (16)(5) - \pi (9)(5)$$

