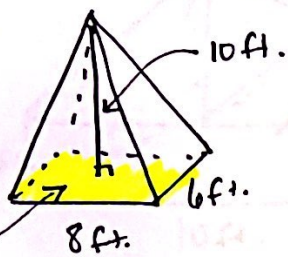


11.3 p. 762-764 (13-45) odd

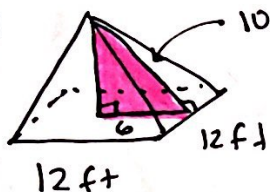
(13.)



$$B = 8 \cdot 6 = 48 \text{ ft}^2$$

$$V = \frac{Bh}{3} = \frac{(48)(10)}{3} = \boxed{160 \text{ ft}^3}$$

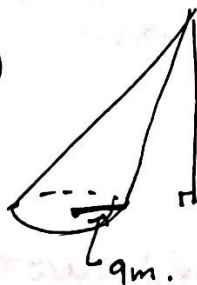
(15.)



height = 8 ft

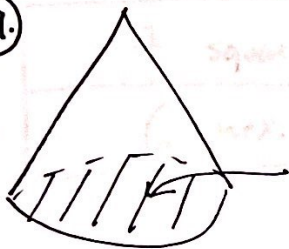
$$V = \frac{Bh}{3} = \frac{(12)(12)(8)}{3} = \boxed{384 \text{ ft}^3}$$

(17.)

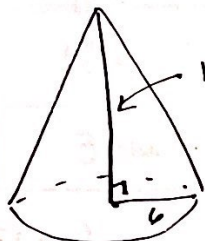


$$V = \frac{\pi r^2 h}{3} = \frac{\pi (9)^2 (41)}{3} = \frac{\pi (81)(41)}{3} = \boxed{1107 \pi \text{ m}^3} \approx \boxed{3477.7 \text{ m}^3}$$

(19.)



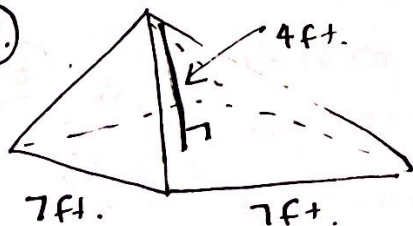
B = circle
 $B = \pi r^2$
 $36\pi = \pi r^2$
 $36 = r^2$
 $6 = r$



$h = 2r = 2(6) = 12$

$$V = \frac{\pi r^2 h}{3} = \frac{\pi (6)^2 (12)}{3} = \boxed{144 \pi \text{ ft}^3} \approx \boxed{452.4 \text{ ft}^3}$$

(21.)



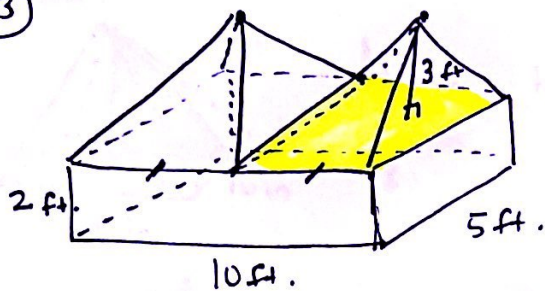
dimension mult by 6

$$V = \frac{Bh}{3} = \frac{42(42)(24)}{3} = \frac{42336}{3} \text{ ft}^3$$

$$V = \frac{Bh}{3} = \frac{7 \cdot 7 \cdot 4}{3} = \frac{196}{3} \text{ ft}^3$$

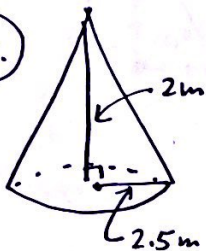
The volume is mult by $(6)^3$ or 216

23



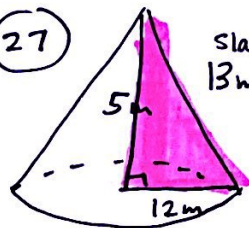
$$\begin{aligned} \text{Volume} &= \text{rect prism} + 2 \left(\text{rect pyramid} \right) \\ &= lwh + 2 \left(\frac{Bh}{3} \right) \\ &= (10)(5)(2) + 2 \left(\frac{5 \cdot 5 \cdot 3}{3} \right) \\ &= 100 + 2(25) \\ &= \boxed{150 \text{ ft}^3} \end{aligned}$$

25.



$$\begin{aligned} V &= \frac{\pi r^2 h}{3} \\ &= \frac{\pi (2.5)^2 (2)}{3} \\ &= \boxed{\frac{12.5\pi}{3} \text{ or } \frac{25\pi}{6} \text{ m}^3} \end{aligned}$$

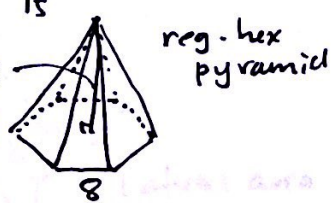
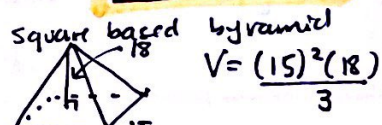
27



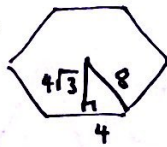
$$\begin{aligned} V &= \frac{\pi r^2 h}{3} \\ &= \frac{\pi (12)^2 (5)}{3} \\ &= \boxed{240\pi \text{ m}^3} \end{aligned}$$

sides of base base edge height ✓

29.	4 square	15 m.	18 m.	1350 m ³
31.	6 hex.	8 cm	3 cm	96√3 ≈ 166.6 cm ³

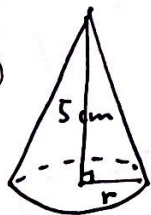


$$\begin{aligned} B &= \frac{ap}{2} = \frac{4\sqrt{3}(48)}{2} \\ B &= 96\sqrt{3} \end{aligned}$$



$$V = \frac{Bh}{3} = \frac{96\sqrt{3}(3)}{3}$$

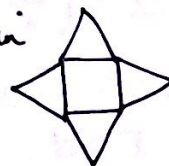
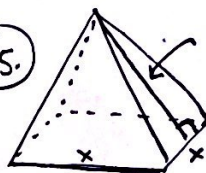
33.



$$\begin{aligned} V &= 125\pi \\ 125\pi &= \frac{\pi r^2 h}{3} \\ 375\pi &= \pi r^2 (5) \\ 75\pi &= \pi r^2 \\ r^2 &= 75 \\ r &= 5\sqrt{3} \end{aligned}$$

$$\begin{aligned} C &= 2\pi r \\ &= 2\pi(5\sqrt{3}) = \boxed{10\pi\sqrt{3} \text{ cm}} \end{aligned}$$

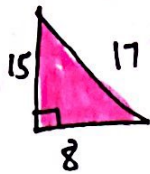
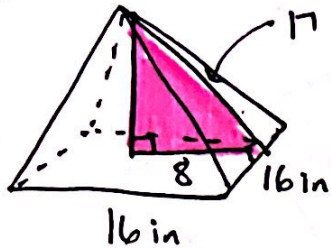
35.



$$\text{Surface area} = x \cdot x + 4 \left(\frac{17x}{2} \right)$$

$$\begin{aligned} 800 &= x^2 + 34x \\ 0 &= x^2 + 34x - 800 \\ 0 &= (x+50)(x-16) \\ x &= -50 \\ x &= 16 \leftarrow \text{yes} \end{aligned}$$

35. Cont.

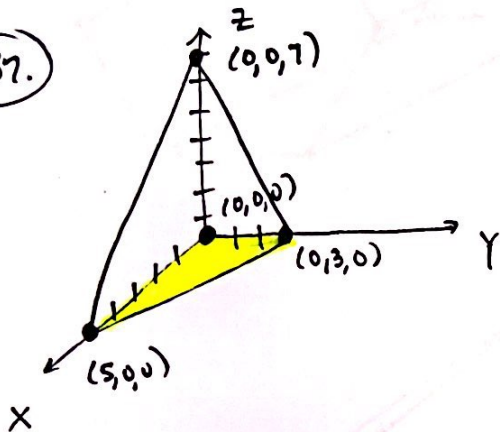


height = 15 in

$$V = \frac{Bh}{3} = \frac{(16)^2(15)}{3}$$

$$= 1280 \text{ in}^3$$

37.

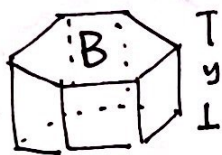


- (x, y, z)
- $(0, 0, 0)$
- $(5, 0, 0)$
- $(0, 3, 0)$
- $(0, 0, 7)$

$$V = \frac{Bh}{3} = \frac{\left(\frac{3.5}{2}\right)(7)}{3} = \frac{52.5}{3}$$

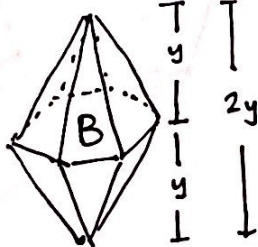
$$= 17.5 \text{ u}^3$$

39. Base areas are the same



$$V = Bh$$

$$= By$$

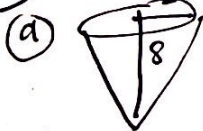


$$V = 2\left(\frac{Bh}{3}\right)$$

$$= \frac{2By}{3}$$

Volume of prism to double pyramid
3:2

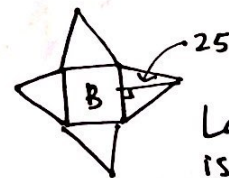
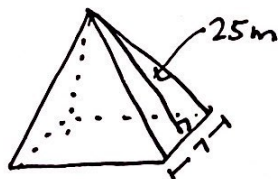
41.



$$V = \frac{\pi(2)^2(8)}{3}$$

$$\approx 33.5 \text{ in}^3$$

43.

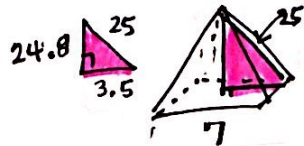


Lateral area is area of 4 triangles

$$4\left(\frac{bh}{2}\right) = \frac{4(25)b}{2}$$

$$350 = 50b$$

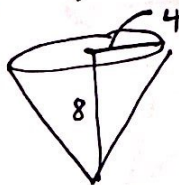
$$b = 7$$



$$V = \frac{Bh}{3} = \frac{(7)^2(24.8)}{3} \approx 404.3$$

H

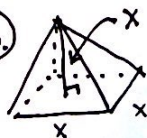
42.



$$V = \frac{\pi(4)^2(8)}{3}$$

$$\approx 134.0 \text{ in}^3$$

45.



$$V = \frac{Bh}{3} = \frac{(x^2)(x)}{3} = \frac{x^3}{3} = 243$$

$$9$$

$$x^3 = 729$$

$$\sqrt[3]{x^3} = \sqrt[3]{729}$$

Jumbo is 4 times as large
so $1.25(4) = 5.00$