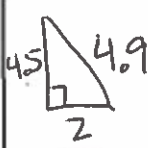


# P.577 (1)

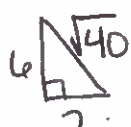
$$LA = \pi r l$$

$$= \pi (2)(4.9)$$

$$= 30.941$$


**31 m<sup>2</sup>**

# (2)



$$LA = \frac{1}{2} P l$$

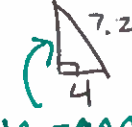
$$= \frac{1}{2} (16)(2\sqrt{10})$$

$$= 16\sqrt{10} \text{ m}$$

exact →

Nearest whole # **51 m<sup>2</sup>**

# (4)



$l = 7.2$   
 $P = 32$   
 $B = 64$


$$SA = \frac{1}{2} P l + B$$

$$= \frac{1}{2} (32)(7.2) + 64$$

$$= 179.2$$

**179 in<sup>2</sup>**

# (5)



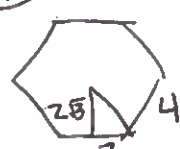
$$SA = \pi r l + \pi r^2$$

$$\pi (3)(8) + \pi (3^2)$$

$$24\pi + 9\pi$$

**33π ft<sup>2</sup>**

# (6)

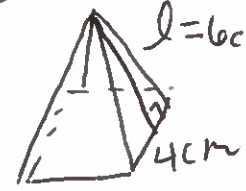


$l = 8$   
 $P = 24$   
 $B = 2\sqrt{3}(24)$

$$SA = \frac{1}{2} (24)(8) + 24\sqrt{3}$$

**96 + 24√3 m<sup>2</sup>**  
 $\approx 137.57 / 138 \text{ m}^2$

# (8)



$l = 6 \text{ cm}$   
 $4 \text{ cm}$

Answers may vary.

# 9 cone

$$LA = 4.8\pi \text{ in}^2$$

$r = 1.2$   $l = ?$


$$LA = \pi r l$$

$$\frac{4.8\pi}{1.2} = \frac{\pi (1.2) l}{1.2}$$

$$4 = l$$

**4 in**

# 10



$LA = 240 \text{ ft}^2$   
 $h = ?$

$$LA = \frac{1}{2} P l$$

$$240 = \frac{1}{2} (48) l$$

$$240 = 24l$$

$$10 = l$$

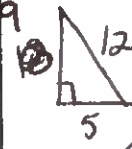
**h = 8 ft**

# P.587 #1

$$V = \frac{1}{3} B h = \frac{1}{3} (12) 11$$

**V = 443 <sup>2</sup>/<sub>3</sub> cm<sup>3</sup>**  
 $\approx 443.7 \text{ cm}^3$

# (2)



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

$$V = \frac{1}{3} (100)(10.9)$$

**V = 363.6 m<sup>3</sup>**

# (5)

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

$$= \frac{1}{3} \pi r^2 h$$

$$= \frac{1}{3} \pi (2^2)(4)$$

**V =  $\frac{16}{3} \pi \text{ ft}^3$**

# (8)

Cone will be  $\frac{1}{3}$  of the volume of the cylinder.

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

# P. 587 (9)

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

$$= \frac{1}{3}(49)(7.5)$$

$$\frac{122.5}{1} = 122.5$$

123 in<sup>3</sup>

# (10)

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

$$V = \frac{1}{3}(36\sqrt{3})(15)$$

180√3 cm<sup>3</sup>

# 13

$$h = 6^2$$

$$6^2 \frac{1}{3}(6^2)(6^2)$$

a) 79,442.6 79,000 m<sup>3</sup>

b) 1/3 height 6^2 20 2/3 m

# P. 593 (#1)

d = 30m

$$SA = 4\pi r^2$$

$$4\pi(15^2)$$

900π m<sup>2</sup>

# (#5)

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

r = 5ft

$$\frac{4}{3}\pi(5^3)$$

$$\frac{4}{3}\pi(125)$$

166 2/3 π ft<sup>3</sup>

524 ft<sup>3</sup>

# (#6)

D = 12

r = 6

$$V = \frac{4}{3}\pi(6^3)$$

$$V = \frac{4}{3}\pi(216)$$

288π cm<sup>3</sup>

905 cm<sup>3</sup>

# (8)

d = 68mm

r = 34

$$SA = 4\pi r^2$$

$$4\pi(34^2)$$

4624π mm<sup>2</sup>

# (11)

C = 14cm

$$\frac{2\pi r}{2\pi} = \frac{14}{2\pi}$$

$$r = 2.23$$

$$SA = 4\pi r^2$$

$$4\pi(2.23^2)$$

62 cm<sup>2</sup>

# (12)

C = 27in

$$\frac{2\pi r}{2\pi} = \frac{27}{2\pi}$$

$$r = 4.3...$$

$$SA = 4\pi r^2$$

$$4\pi(4.3^2)$$

$$73.86\pi$$

232 in<sup>2</sup>

# (13)

V = 900 in<sup>3</sup>

$$\frac{3}{4}(\frac{4}{3}\pi r^3) = (900)^{3/4}$$

$$\frac{\pi r^3}{\pi} = \frac{675}{\pi}$$

$$r^3 = 214.8591732$$

r = 5.989...

$$SA = 4\pi r^2 = 451 in^2$$

# (14)

V = 3000 m<sup>3</sup>

$$\frac{3}{4}(\frac{4}{3}\pi r^3) = (3000)^{3/4}$$

$$\frac{\pi r^3}{\pi} = \frac{2250}{\pi}$$

$$r^3 = 716.97...$$

r = 8.947...

$$SA = 4\pi(8.947...)^2$$

1005.923516

1006 cm<sup>2</sup>

# (18)

a) sphere r = 4

b)  $V = \frac{4}{3}\pi(4^3) = 85 \frac{1}{3}\pi u^3$

c)  $SA = 4\pi r^2$

$$4\pi(4^2)$$

SA = 64π u<sup>2</sup>