

Geometry

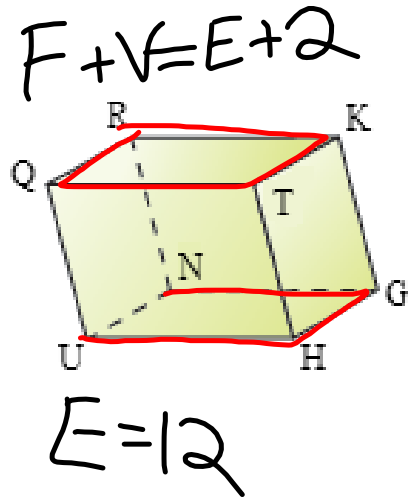
Test 11

Review

List the faces and vertices of the figure.

F(6)
 RQTK
 NGHU
 HUQT
 RKTQ or RQTK
 TKGH
 QUNR

V=8
 R, Q, T, K
 U, N, G, H



Use Euler's Formula to fill in the missing values

Faces: 11

Edges:

Vertices: 11

$$\begin{array}{r}
 11 + 11 = E + 2 \\
 -2 \quad -2 \\
 20 = E
 \end{array}$$

Faces:

Edges: 20

Vertices: 12

$$\begin{array}{r}
 F + V = E + 2 \\
 F + 12 = 20 + 2 \\
 -12 \quad -12 \\
 F = 10
 \end{array}$$

Find the Lateral Area, Surface Area and Volume.

$$LA = ph$$

$$LA = (45)(30)$$

$$LA = 1350 \text{ cm}^2$$

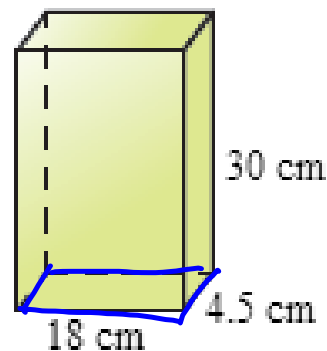
$$SA = LA + 2B$$
$$= 1350 + 162$$

$$= 1512 \text{ cm}^2$$

$$V = Bh$$

$$(81)(30)$$

$$2430 \text{ cm}^3$$



$$p = 36 + 9 = 45$$

$$B = 18 \cdot 4.5 = 81$$

Find the Lateral Area, Surface Area and Volume.

$$LA = 2\pi r h$$

$$d\pi h$$

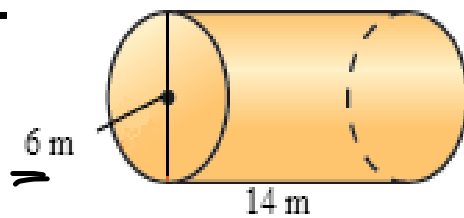
$$LA = 6\pi \cdot 14$$

$$LA = 84\pi m^2$$

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

$$84\pi + 18\pi$$

$$102\pi m^2$$



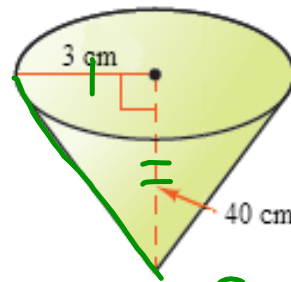
$$\pi(6)^2 = \underline{\underline{36\pi}}$$

$$V = Bh$$

$$= (36\pi)(14)$$

$$= 504\pi m^2$$

Find the Lateral Area, Surface Area and Volume.



$$LA = \pi r l$$

$$LA = \pi (3)(40.11)$$

$$120.33$$

$$LA = 378.03 \text{ cm}^2$$

$$SA = LA + B$$

$$378.03 + 28.27$$

$$SA = 406.30 \text{ cm}^2$$

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

$$\frac{1}{3} (28.27)(40)$$

$$376.93 \text{ cm}^3$$

$$3^2 + 40^2 = l^2$$

$$9 + 1600 = l^2$$

$$\sqrt{1609} = \sqrt{l^2}$$

$$l = 40.11$$

Find the Lateral Area, Surface Area and Volume.

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

$$\frac{1}{2} (48) (13.42)$$

$$321.99 \text{ cm}^2$$

$$SA = \boxed{LA} + \boxed{B}$$

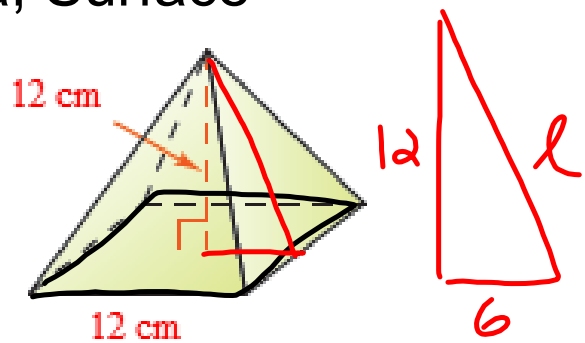
$$= 321.99 + 144$$

$$465.99 \text{ cm}^2$$

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

$$\frac{1}{3} (144) (12)$$

$$576 \text{ cm}^3$$



$$p = 12 \cdot 4 = 48$$

$$12^2 + 6^2 = l^2$$

$$144 + 36 = l^2$$

$$\sqrt{180} = \sqrt{l^2}$$

$$l = 13.42$$

Find the Surface Area and
Volume.

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

$$4\pi \cdot 81$$

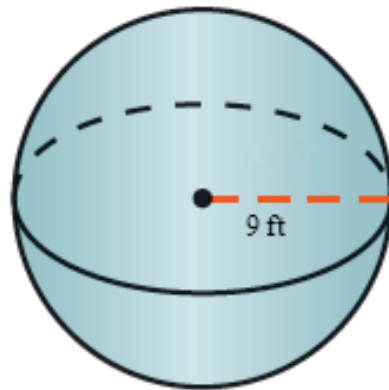
$$324\pi \text{ ft}^2$$

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

$$\frac{4}{3}\pi \cdot 243$$

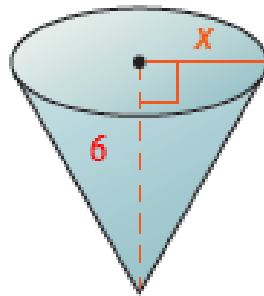
$$\frac{4}{3}\pi \cdot 729$$

$$972\pi \text{ ft}^3$$



Find the radius.

$$V = 72\pi \text{ m}^3$$



$$72\pi = \frac{1}{3}\pi r^2 h$$

$$\frac{72\pi}{2\pi} = \frac{\cancel{1}\pi r^2 \cancel{6}}{\cancel{3}\pi}$$

$$36 = r^2 \cdot 2\pi$$

$$r = 6\text{m}$$