

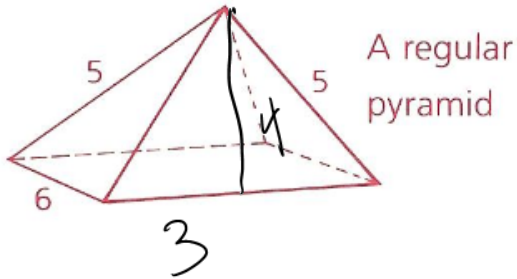
## Area &amp; Volume (ch 12) Review: 1-11, 17, 19, 21

Note Title

5/12/2016

- 1 Find the lateral area and the total area of the regular pyramid and the cylinder.

a



$$4(6)(5)$$

$$4(30) = 120$$

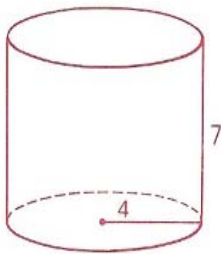
$$LA = 120$$

$$6^2 = 36$$

$$+ 44$$

$$84 = TA$$

b



$$\pi d \cdot h$$

$$\pi 8 \cdot 7$$

$$L.A. = 56\pi$$

$$2(\pi r^2)$$

$$2\pi$$

$$2(16\pi)$$

$$32\pi + 56\pi$$

$$TA = 88\pi$$

- 2 Find the volume of  
a A cube with a side of 8

$$Bh \quad 8 \times 8 \times 8 \quad \begin{array}{r} 64 \\ \times 8 \\ \hline 512 \end{array}$$

- b A rectangular box that measures 3 by  $4\frac{1}{2}$  by 8

$$V = 3 \cdot 4\frac{1}{2} \cdot 8 \\ 108$$

- c A cylinder with a radius of 7 and a height of 2

$$V = Bh \\ 49\pi \cdot 2 \\ 98\pi$$

- d A pyramid with a height of 5 and a base area of 12

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

$$\frac{1}{3} 12(5)$$

$$\frac{1}{3} 60$$

$$\frac{60}{3} = 20$$

e A prism with a height of 5 and a base area of 12

$$V = Bh$$
$$V = 12(5)$$
$$60$$

f A sphere with a radius of 2

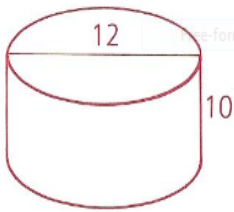
$$\frac{4}{3} \pi r^3$$

$$\frac{4}{3} \pi 8$$

$$\frac{32}{3} \pi$$

3 Find the volume and the total surface area of each solid.

a



V

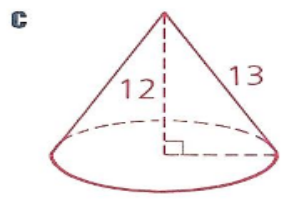
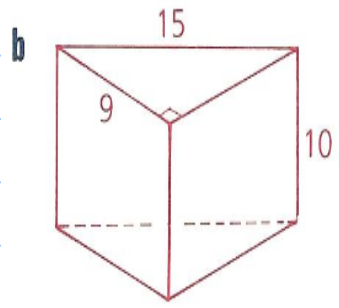
TSA

$$\pi d \cdot h + 2\pi r^2$$

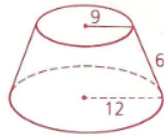
$$\pi 12 \cdot 10 + 2\pi 6^2$$

$$120\pi + 72\pi$$

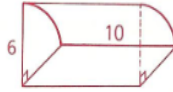
$$192\pi$$



21 A frustum of a cone is shown. Find the volume of this solid.



19 A cylinder is cut into four equal parts.  
Find the total area of the part shown.



- 17 A hole with a diameter of 2 in. is drilled through a block as shown. Find the volume of the resulting solid to the nearest cubic inch.

