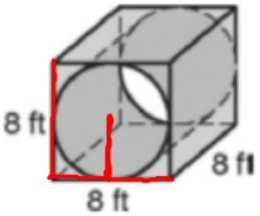
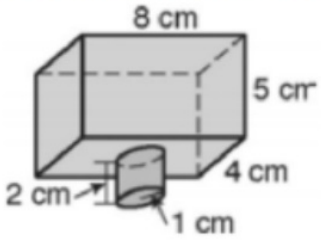
Find the volume of each composite figure. Round to the nearest tenth.

R=4

1.

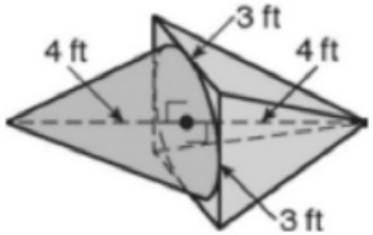


2.

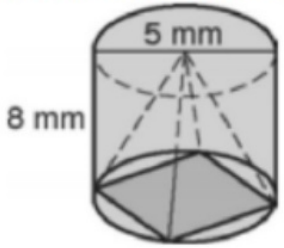


Find the volume of each composite figure. Round to the nearest tenth.

3.



4.

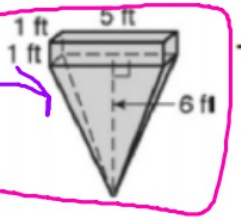


5. ~~Find the volume of the cone.~~

Find the volume of the cone after the radius and height are divided by 3.

Describe the effect on the volume after dividing the dimensions of a cone by 3.

Find the volume of the composite figure.



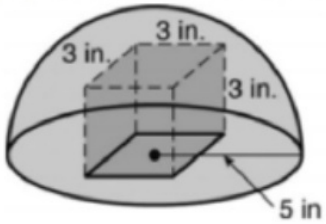
$\frac{1^3}{3^3} = \frac{1}{27}$ volume times smaller

$V = \frac{1}{3}\pi(6^2)(12)$

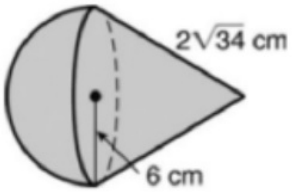
$\frac{1}{3}\pi \left(\frac{1}{3}6\right)\left(\frac{1}{3}6\right)\frac{1}{3}(12)$

Find the ~~surface area~~ and volume of each composite figure. Round to the nearest tenth.

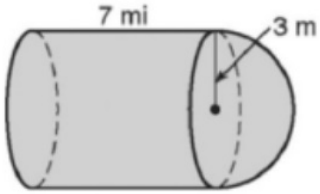
6.



7.



8. Find the volume and ~~surface area~~ of the composite figure. Give your answers in terms of π.

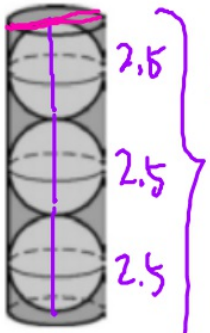


_____

9. FRI.

Use the figure for Exercises 8–10. The figure shows a can of three tennis balls. The can is just large enough so that the tennis balls will fit inside with the lid on. The diameter of each tennis ball is 2.5 in. Give exact fraction answers.

r = 1.25



h = 7.5

Find the total volume of the can. _____

Find the volume of empty space inside the can. _____

Tell what percent of the can is occupied by the tennis balls. _____

$$\frac{\text{tennis ball } V}{\text{total (cylinder) } V}$$

14. If the lengths and height of a prism are tripled, what happens to the...

a) Surface area of the prism? $3^2 = 3 \cdot 3 = 9$ times bigger

b) Volume of the prism? $3^3 = 3 \cdot 3 \cdot 3 = 27$ times bigger

3 AF $3^2 = 3 \cdot 3 = 9$ times bigger

15. If the ratio of the lengths and heights of two similar prisms is 2:5, what is the ratios of the

a) Surface areas of the two prisms?

b) Volumes of the two prisms?

16. The ratios of the lengths and heights of two smilar prisms is 1:6. What is the ratio of the

a) Surface areas of the two prisms?

b) Volumes of the two prisms?

SF $\cdot \frac{1}{3}$ AF $= \frac{1^2}{3^2} = \frac{1}{9}$ VF $= \frac{1^3}{3^3} = \frac{1}{27}$

17. The ratios of the lengths and heights of two similar prisms is 1:3.

a) If the height of the smaller prism is 6 cm, what is the height of the larger prism?

$\frac{1}{3} \simeq \frac{6}{x}$ $x = 18$

b) If the surface area of the smaller prism is 65 cm^2, what is the surface area of the larger prism?

Area $\rightarrow \frac{1}{9} = \frac{65}{x}$ $x = 65 \cdot 9 = 585$

c) If the volume of the larger prism is 2700 cm^3, what is the volume of the smaller prism

Volume $\frac{1}{27} = \frac{x}{2700}$ $27x = 2700$

Volumes

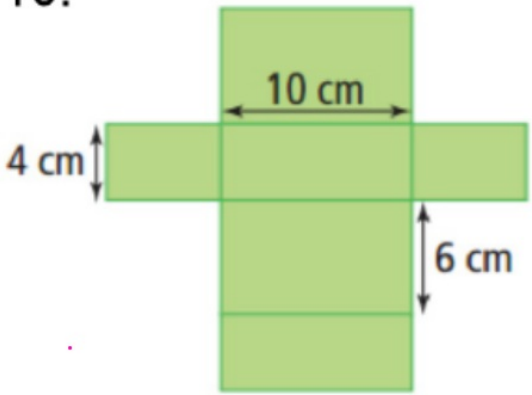
(18) 8 : 729 $\rightarrow$ VF $\frac{8}{729}$ $\rightarrow$ SF $\frac{2}{9}$ (2·2·2 / 9·9·9)

$x = 100$

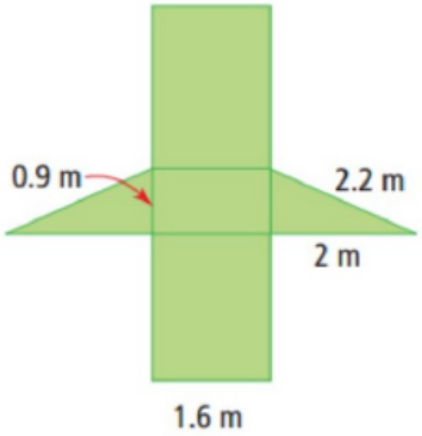
FOR FRIDAY

Find the surface area of each prism using the area net

10.



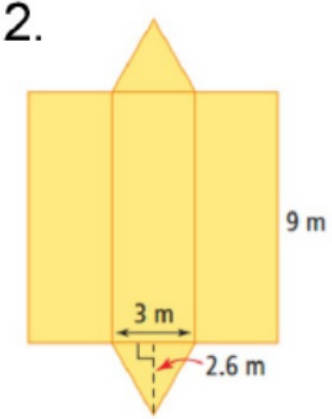
11.



FOR FRIDAY

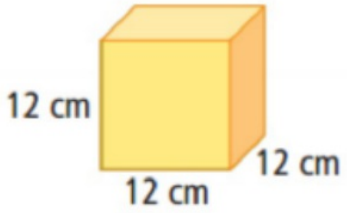
Find the surface area of each prism using the area ne

12.

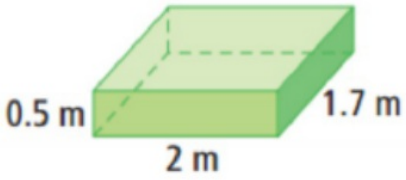


13. What is the surface area of each object?

a)



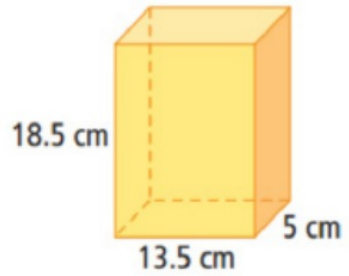
b)



FOR FRIDAY

19. Each prism is made from the same precious metal.
Prism A sells for $12,000 and
Prism B sells for $2100.
Which is the better deal?

Prism A



Prism B