

Volume RWS (with spheres)

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#1-5, Find the volume for each solid.

1. Triangular Prism

$26^2 = 24^2 + x^2$
 $x = 10$
 area base $\times H$
 $\frac{1}{2}(24 \cdot 10) \cdot 10$
 1200 cm^3

2. Sphere

Cubed, not squared
 $\frac{4}{3} \pi (14)^3$
 11494.04 cm^3

3. Trapezoidal Pyramid

Base $\times H$
 $\frac{1}{2}(8+4) 5 \times 15$
 30×15
 450
 $\frac{450}{3}$ Pyramid $\div 3$
 150 u^3

4. Half Cone

area base $\times H$
 Half Circle
 $\frac{\pi r^2}{2} \times H$
 $\frac{\pi (12)^2}{2} \times 14$
 791.68
 $\frac{791.68}{3}$
 Cone $\div 3$
 263.89 u^3

Could \div by 2 later

5. Composite Solid

area of base $\times H$
 $\square + \triangle$
 $(42 \cdot 20) + (\frac{1}{2} \cdot 42 \cdot 20)$
 $840 + 420$
 1260×70
 $88,200 \text{ u}^3$

height is distance between bases

7. Find the volume of the Earth if we accept it is basically spherical and its diameter is 7,918 miles.

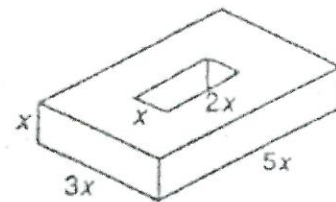
$\frac{4}{3} \pi (3959)^3$
 2.59×10^{11} or $259,324,160,000 \text{ m}^3$
 (scientific notation)

8. A cylinder's dimensions are multiplied by 3

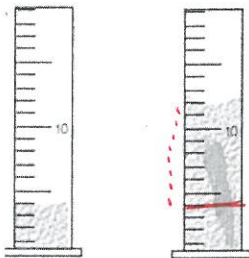
- a. What is the effect on the perimeter of the base? $\times 3$
- b. What is the effect on the area of the base? $\times 9$
- c. What is the effect on volume? $\times 27$

9. Find the volume of solid at right in a simplified algebraic form:

Big - Small
 $(3x)(5x)(x) - (2x)(x)(x)$
 $15x^3 - 2x^3 = 13x^3 \text{ units}^3$



10.



When a piece of carrot is placed in a test tube with a diameter of 10 cm. the water rises. Find the volume of the carrot using displacement if the ruler on test tube marks centimeters.

$(\pi 5^2)(8)$ close to this number
 628.32 cm^3

11. Find the volume of the square prism at right.
 Note: The center of prism has been removed.

$25.8 - 4.8$
 big small
 168 cm^3

