

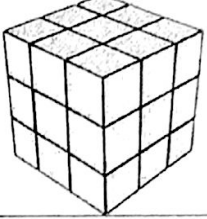
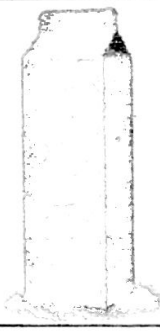
# WHAT IS X??

## Missing Measures of Solids:

What should you look for?

- Write down any formulas you know that could describe the situation or shape (eg. the volume equation or surface area)
- Replace the variable with any values that you know.
- Isolate for the unknown variable.

**SHOW ALL YOUR WORK ON A SEPARATE SHEET OF PAPER!!! TO BE HANDED IN! Do as many as you can!**

1)	What are the dimensions of each of the small cubes if the volume of the Rubic cube is $216 \text{ cm}^3$ ?	
2)	Find the height of a rectangular based prism, with a total volume of $248 \text{ cm}^3$ , and whose base has dimensions 4 cm by 10 cm.	
3)	A pyramid has a square base with 8 cm sides as its base. If the pyramid's total area is $224 \text{ cm}^2$ , find the height of the pyramid.	
4)	The area of the base of a cylinder is $36\pi \text{ cm}^2$ . Calculate the total area if its height is 12 cm.	
5)	Determine the radius of a sphere if it's total area is $100\pi \text{ cm}^2$ .	
6)	The milk in a 1-liter carton is contained only in the lower portion, which corresponds to a prism whose square base measures 7 cm by 7 cm. a) what height does the milk reach when the carton is full? b) If, in a 2-liter carton, the milk reaches the same height, what are the approximate dimensions of the cartons base?	
7)	Julie wants to prepare some soup. She has two cylindrical pots: one measures 7 cm in height and the radius of its base is 6 cm; the other measures 9 cm in height and the radius of its base is 8cm. She opens a can containing 284 mL of concentrated soup to which she must add EQUAL volume of water. a) What volume with the soup occupy once the water is added? b) What pot would you suggest Julie use and why? c) What height will the soup reach in each pot?	

Handwritten work for question 7:

2) height = 6.2 cm  
 4)  $A_1 = 216\pi \text{ cm}^2 / \text{OR} / 678.58 \text{ cm}^2$   
 6) (a) height = 20.41 cm  
 7) (a)  $V_{\text{soup}} = 568 \text{ cm}^3$   
 7) (c)  $h_1 = 5 \text{ cm}$ ;  $h_2 = 2.83 \text{ cm}$

Handwritten work for question 7:

1) side width = 3 cm  
 3) height = 9.17 cm  
 5) radius = 5 cm  
 6) (b) side = 9.9 cm  
 7) (b) pot 1 is enough

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