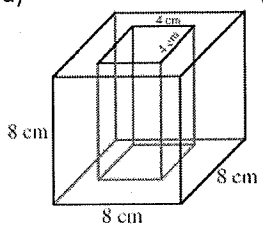
Name: Key Date:

HW Math 8 Section 9.4 Problem Solving with Volume:

1. Given each composite solid, find the volume

a)



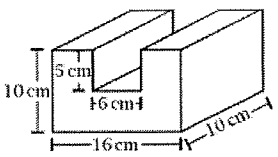
$V = 8\times8\times8$ $V = 4\times4\times8$

$= 512$ $= 128$

$512 - 128$

$= 384\,cm^3$

b)



$V_1 = 10\times16\times10$

$= 1600$

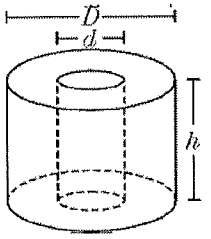
$V_2 = 5\times6\times10$

$= 300$

$V_T = 1600 - 300$

$= 1300\,cm^3$

c) $D = 24cm,\ d = 6cm,\ h = 18cm$



$V_2 = \pi r^2 h$

$= 3.14\times3^2\times18$

$= 508.68$

$V_1 = \pi r^2 h$

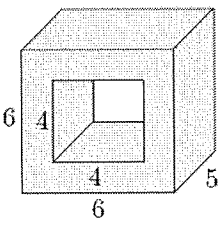
$= 3.14\times12^2\times18$

$= 8138.88$

$V_T = 8138.88 - 508.68$

$= 7630.2$

d)



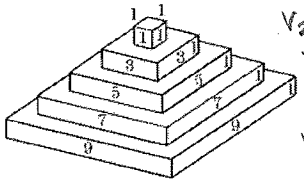
$V_1 = 6\times6\times5$ $V_2 = 4\times4\times5$

$= 180$ $= 100$

$V_T = 180 - 100$

$= 80$

e)



$V_1 = 1$

$V_2 = 9$

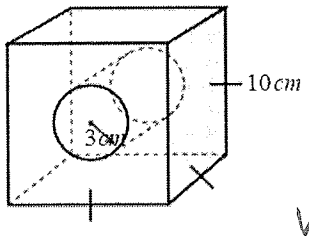
$V_3 = 25$

$V_4 = 49$

$V_5 = 81$

$V_T = 165$

f)



$V_1 = 10\times10\times10$

$= 1000\,cm^3$

$V_2 = \pi r^2 h$

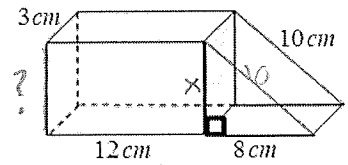
$= 3.14\times3^2\times10$

$= 282.6\,cm^3$

$V_T = 1000 - 282.6$

$= 717.4\,cm^3$

g)



$x^2 = 10^2 - 8^2$

$= 100 - 64$

$x^2 = 36$

$x = 6$

$V_1 = 3\times12\times6$

$V_1 = 216\,cm^3$

$V_2 = \frac{b\times h}{2}\times l$

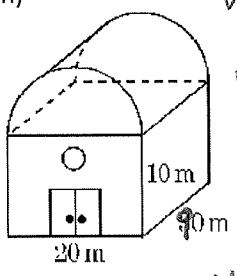
$= \frac{8\times6}{2}\times3$

$= 72\,cm^3$

$V_T = 216 + 72$

$= 288\,cm^3$

h)



$V_1 = 20\times90\times10$

$= 18000$

$V_2 = \frac{\pi r^2 h}{2}$

$= \frac{3.14\times10^2\times90}{2}$

$= 14130$

$V_T = 18000 + 14130$

$= 32130\,m^3$