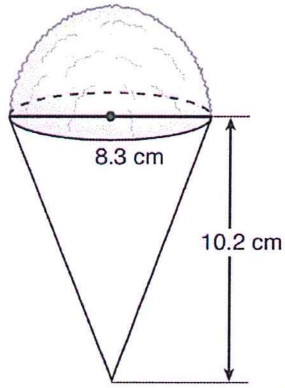
Name Schlansky
Mr. Schlansky

Date ____________
Geometry

Compound Volume

Find the compound volume of the following shapes rounded to the *nearest tenth of a unit*.

1.



Cone: $V=\frac{1}{3}\pi r^2 h$

$V=\frac{1}{3}\pi(4.15)^2(10.2)$

$V=183.$

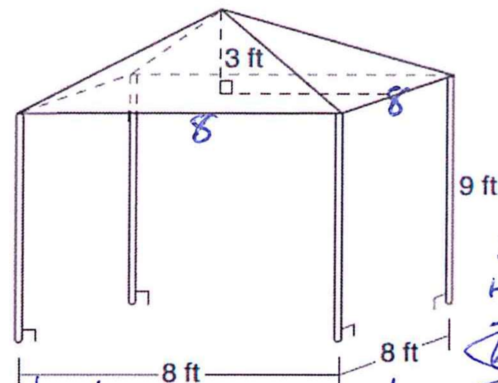
hemisphere: $V=\frac{1}{2}(\frac{4}{3}\pi r^3)$

$V=\frac{1}{2}(\frac{4}{3}\pi(4.15)^3)$

$V=149.$

$183.. + 149.. = 333.7$

2.



576
+64
640

rectangular prism

$V=lwh$

$V=8(8)(9)$

$V=576$

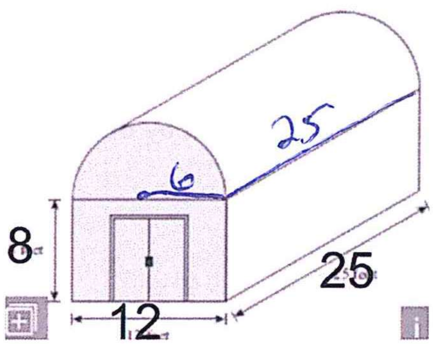
pyramid

$V=\frac{1}{3}lwh$

$V=\frac{1}{3}(8)(8)(3)$

$V=64$

3.



rectangular prism

$V=lwh$

$V=8(12)(25)$

$V=2400$

half-cylinder

$V=\frac{1}{2}\pi r^2 h$

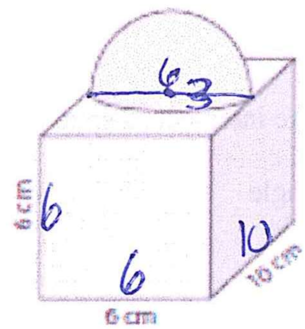
$V=\frac{1}{2}\pi(6)^2(25)$

$V=1413.7..$

$2400 + 1413.7..$

3813.7

4.



rectangular prism

$V=lwh$

$V=(6)(6)(10)$

$V=360$

hemisphere

$V=\frac{1}{2}(\frac{4}{3}\pi r^3)$

$V=\frac{1}{2}(\frac{4}{3}\pi(3)^3)$

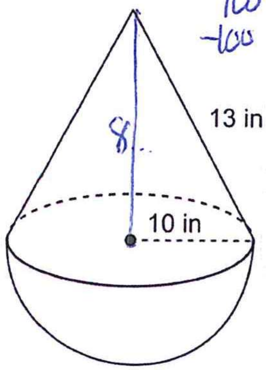
$V=56..$

$360 + 56..$

416.5

5.

$a^2+b^2=c^2$
$10^2+b^2=13^2$
$100+b^2=169$
$-100 \quad -100$
$\sqrt{b^2}=\sqrt{69}$
$b=8..$

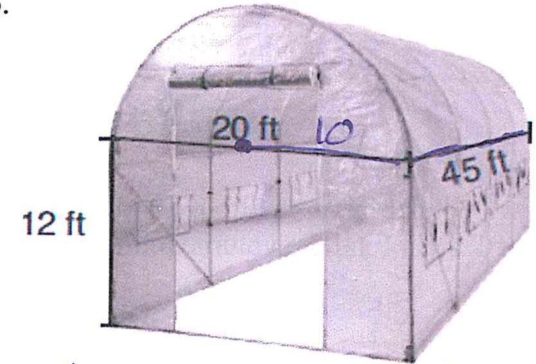


Cone:
$V=\frac{1}{3}\pi r^2h$
$V=\frac{1}{3}\pi(10)^2(8..)$
$V=869..$

hemisphere
$V=\frac{1}{2}(\frac{4}{3}\pi r^3)$
$V=\frac{1}{2}(\frac{4}{3}\pi(10)^3)$
$V=2094..$

$869..+2094..=2964.3$

6.

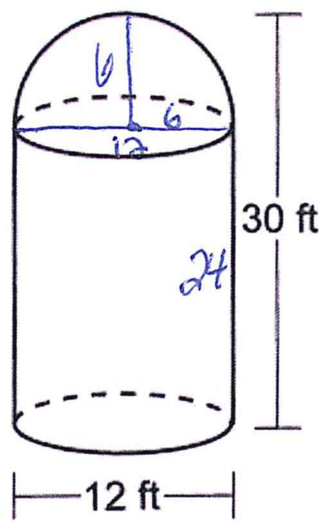


rectangular prism
$V=lwh$
$V=12(20)(45)$
$V=10800$

half cylinder
$V=\frac{1}{2}\pi r^2h$
$V=\frac{1}{2}\pi(10)^2(45)$
$V=7068..$

$10800+7068..=17868.6$

7.

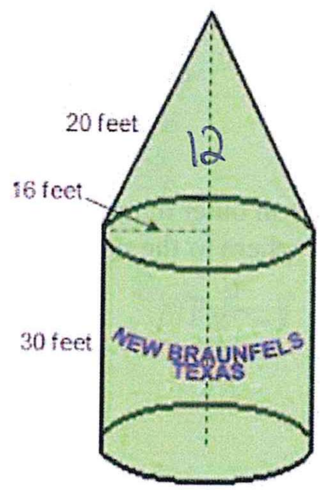


cylinder
$V=\pi r^2h$
$V=\pi(6)^2(24)$
$V=2714..$

hemisphere
$V=\frac{1}{2}(\frac{4}{3}\pi r^3)$
$V=\frac{1}{2}(\frac{4}{3}\pi(6)^3)$
$V=452..$

$2714..+452..$ 3166.7

8.



$a^2+b^2=c^2$
$16^2+b^2=20^2$
$256+b^2=400$
$-256 \quad -256$
$\sqrt{b^2}=\sqrt{144}$
$b=12$

Cylinder
$V=\pi r^2h$
$V=\pi(16)^2(30)$
$V=24127..$

Cone
$V=\frac{1}{3}\pi r^2h$
$V=\frac{1}{3}\pi(16)^2(12)$
$V=3216..$

$24127..+3216..$

27344.4