

Sec. 1.7 : Composite Objects

Volume \Rightarrow find each volume separately, and add together

Surface Area \Rightarrow find the surface area and subtract any overlap.

Worksheet.

1. cylinder \rightarrow S.A: $2\pi r^2 + 2\pi rh$

Sphere \rightarrow S.A: $4\pi r^2$

cylinder
 S.A: $2\pi(3)^2 + 2\pi(3)(14)$
 $= 320.44$

$\frac{1}{2}$ sphere
 S.A = $2\pi r^2$
 $= 2\pi(3)^2$
 $= 56.55$

Total: $320.44 + 56.55$
 $= 376.99$

— overlap (one circle / top cylinder)
 $-\pi r^2$

Ans: 348.7 in²

2. 81.8 cm³

cone \rightarrow 49.1
 $\frac{1}{2}$ sphere \rightarrow 32.7

3. 1783 in³

4. 155 ft²

