

Answers to Integrated Review - 7.1-7.5

1) 720 ft^2
 1068.14 cm^2

2) 360 ft^2 ; 547.2 ft^2
 1193.81 in^2

3) 343.75 km^2 ; 552.75 km^2
 1230.25 in^2

7) 1017.88 mi^2

1. $SA = 2(9)(12) + 2(9)(12) + 2(12)(12)$
 $= 720 \text{ ft}^2$

$V = (9)(12)(12)$
 $= 1296 \text{ ft}^3$

2. $p = 6 \times 6 = 36$

$B = \frac{1}{2}(5.2)(36) = 93.6$

$L = (36)(10) = 360$

$SA = 360 + 2(93.6) = 547.2$

$V = (93.6)(10) = 936$

3. $L = \frac{1}{2}(12.5)(5)(11) = 343.75$

$SA = 343.75 + 209 = 552.75$

$A = \frac{1}{2}(7.6)(55) = 209$

$V = \frac{1}{3}(209)(9.92) = 691.09$

$h = (7.6)^2 + h^2 = (12.5)^2$

$57.76 + h^2 = 156.25$

$h = 9.92$

4. $SA = 2\pi(10)^2 + 2\pi(10)(7)$
 $= 200\pi + 140\pi$

$= 340\pi$

$V = \pi(10)^2(7)$

$= 700\pi$

5. $SA = 2\pi(10)^2 + 2\pi(10)(9)$
 $= 200\pi + 180\pi$
 $= 380\pi$

$V = \pi(10)^2(9)$

$= 900\pi$

6. $SA = \pi(11)^2 + \pi(11)(24.6)$
 $= 121\pi + 270.6\pi$
 $= 391.6\pi$

$V = \frac{1}{3}\pi(11)^2(22) = \frac{2662}{3}\pi = 887.3\pi$

$h = 11^2 + h^2 = 24.6^2$

$121 + h^2 = 605.16$

$h = 22$

7. $SA = \pi(10)^2 + \pi(10)(22.4)$
 $= 100\pi + 224\pi = 324\pi$

$V = \frac{1}{3}\pi(10)^2(20.04) = 668\pi$

$h = h^2 + 10^2 = (22.4)^2$

$h^2 + 100 = 501.76$

$h = 20.04$