
Math 112

Homework 5 Solutions

Part 1

7.2 #19: $128/3$

7.2 #20: 2π

7.2 #21: $\frac{27\sqrt{3}}{2}$

7.2 #22: $3/16$

7.2 #23(a): $\int_0^h \pi r^2 dx = \pi r^2 h$

Part 2

7.2 #12: $8\pi/9$

7.2 #14: $\frac{2\pi}{35}$

7.2 #16: $\frac{3\pi}{10}$

7.2 #18: 2π

7.2 #36: (a) $\int_0^4 [\pi(8-y)^2 - \pi(\sqrt{y}+2)^2] dy$

(b) $\int_0^2 \pi(x^2+1)^2 dx + \int_2^6 \pi(7-x)^2 dx$

7.2 #37: $5\pi/6$

7.2 #38: $72\pi/5$

7.2 #40: $49\pi/30$