

Answers to Test 2 Review Problems:

1. (a) 0; (b) 2; (c) e

2. $V = \pi/24$

3. 1.4789

4. 6!

5. $y = \left(\frac{3x^2}{4} + 1\right)^{2/3}$

6. (a) $-(x - \pi) + \frac{(x - \pi)^3}{6}$; (b) .00099 (Using $K_n = 1$)

7. \$10,510.50 (if you were 18 at the time of the payment)

8. (a) 16/3 (b) $\frac{40\pi}{3}$

9. (a) $\frac{(\ln x)^3}{3} + C$ (b) $x \arctan x - \frac{\ln(1+x^2)}{2} + C$ (c) $\frac{x^2 \ln x}{2} - \frac{x^2}{4} + C$
(d) $2 \sin(2) + \cos(2) - 1$ (e) $\frac{\sin(4)}{2}$

10. $32/3$ units³

11. 4.35 minutes