

BC Calculus
Test # 5 (1–90) Review Answers

81a. $8\pi \text{ units}^3$

b. $\frac{128}{5}\pi \text{ units}^3$

82a. continuous, differentiability implies continuity

b. $a = -\frac{3}{4}, \quad b = 1$

83a. $\frac{1}{8}(4x + \sin(4x)) + C$

b. $\frac{1}{96}(12x - \sin(12x)) + C$

84a. $y(-\sin x \tan x + \cos x \ln(\cos x))$

b. $y\left(\frac{2}{x-3} + \frac{2x}{3(x^2+3)} - \frac{9x^2}{x^3-4}\right)$

85. $c = 1$

86. $K - L$

87. $56\pi \text{ units}^3$

88a. $y = Ce^{\frac{3x^5}{5}}$

b. 3888, 14.956 yrs \approx Dec. 15, 1997

89a. $\frac{2}{3\pi}$

b. 1.165

90a. 13 units

b. $\frac{28}{3}$ units