

**AB Calculus**  
**Test # 9 (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