

### Problem Set 90

2.  $x(5) = 3$

4a. 1  
b. 2 units

6. 384 feet

8.  $c = \sqrt{\frac{111}{3}}$

10a. 9.531%  
b. \$13,377.93

12.  $y = \ln|x| + C$

14.  $c = \frac{\pi}{2}$

16a.  $2\pi \int_1^2 dx$   
b.  $2\pi \text{ units}^3$

18.  $\frac{1}{4}x^2(2 \ln x - 1) + C$

20.  $-\frac{1}{2} \cot^2 x + C$  or  
 $-\frac{1}{2} \csc^2 x + C$

22.  $\frac{\cos x}{1 + \sin^2 x} + \frac{2x}{x^2 - 1} - \frac{1}{(x + 1)^2}$

24. C