

## Problem Set 97

- 2a.  $C = 18x + 288x^{-1} + 48$   
b.  $x = 4$  m,  $y = 3$  m  
c. \$192

- 4a.  $t = 1, 4$   
b.  $t > 4$   
c.  $t = 4$   
d. 27 units left of the origin

6.  $144 \text{ units}^3$

8.  $\frac{25}{2}$

10.  $f_{\max} = \frac{3}{2}$

12a.  $T_4 = \frac{113}{16} \approx 7.063$

b.  $\frac{32}{5} = 6.4$

c.  $\text{error}_{\max} = 2$

d. 179

14.  $V = 2\pi e(2e - 1) \text{ units}^3$

16.  $\frac{1}{7}$

18. 1

20.  $y = e^{\sin x}$

22.  $\arcsin \frac{x}{3} + C$

24.  $f(0) = -1$