

Review 7.1,7.2,7.4 (Calculator Okay)

1. (Calculator) The velocity function of a moving particle is  $v(t) = 3\cos(2t)$  in/hr for  $0 \leq t \leq \pi$  hours.

a. Find the total distance traveled by the particle during the time interval  $0 \leq t \leq \pi$  hours.

b. Given  $x(0) = 5$ , find  $x(3)$ .

2. Use your calculator to find the area between the curves given below

$$f(x) = 3^{1-x^2} \quad \text{and} \quad g(x) = \frac{x^2 - 3}{10}$$

3. Use your calculator to help you find the length of the arch of the parabola  $y = 9 - x^2$  that lies above the x-axis

4. Use your calculator to find the perimeter of the bell shape in problem number 2.

$$f(x) = 3^{1-x^2} \quad \text{and} \quad g(x) = \frac{x^2 - 3}{10}$$

