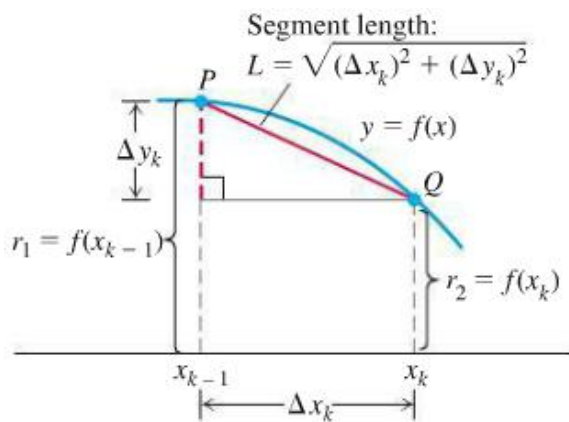


Areas of Surfaces of Revolution

Surface area of a cylindrical surface

Frustum of a cone



If the function of f is differentiable,

$$\sum 2\pi \left(\frac{f(x_{k-1}) + f(x_k)}{2} \right) \sqrt{(\Delta x_k)^2 + (\Delta x_k'(c_k))^2}$$

$$y = x^2 \quad 0 \leq x \leq 2 \quad x\text{-axis}$$

$$y = \frac{x}{2} + \frac{1}{2} \quad 1 \leq x \leq 3 \quad y\text{-axis}$$

$$x = \frac{1}{3} y^{\frac{3}{2}} - y^{\frac{1}{2}} \quad 1 \leq y \leq 3 \quad y\text{-axis}$$