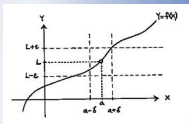
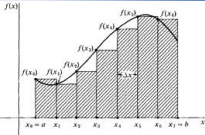


4.5 Squeeze Theorem



$$f'(x) = \lim_{h \rightarrow 0} \frac{f(x+h) - f(x)}{h}$$

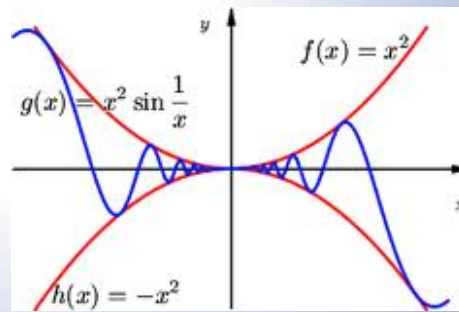
$$\frac{d}{dx} \int_a^x f(t) dt = f(x)$$



$$\lim_{\max \Delta x_i \rightarrow 0} \sum_{i=1}^n f(x_i) \Delta x_i = \int_a^b f(x) dx$$

$$\int_a^b f(x) dx = F(b) - F(a)$$

The squeeze Theorem



Squeeze Theorem

Let f, g, h be functions satisfying $f(x) \leq g(x) \leq h(x)$ for every x near c , except possibly at $x=c$.

If $\lim_{x \rightarrow c} f(x) = \lim_{x \rightarrow c} h(x) = L$,

then $\lim_{x \rightarrow c} g(x) = L$

4.5 Squeeze Theorem

Ex 9 Use the squeeze theorem to determine this limit.

$$\lim_{x \rightarrow \infty} x^{-1/2} \sin x =$$

