

8.8

$$\nmid \ln + \infty = \infty$$

$$\nmid \ln 0^+ = -\infty$$

إذا استبدلنا الحد
التي فوقه a

$$\nmid \ln - \infty = DNE$$

$$\nmid \ln 0^- = DNE$$

إذا استبدلنا الحد
التي تحته a

$$\nmid e^{\infty} = \infty$$

$$\nmid \tan^{-1} \infty = \frac{\pi}{2}$$

$$\nmid e^{-\infty} = 0$$

$$\nmid \tan^{-1} -\infty = -\frac{\pi}{2}$$

6.3

Arc length

$$\int_a^b \sqrt{1 + (\text{المشتقة})^2} dx$$

6.4


Surface area

$$S = \int_a^b 2\pi y \sqrt{1 + (\text{المشتقة})^2} dx$$

radius
when it's around
the x-axis

b.1)

Disk Shell Method




$V = \int A = \pi r^2$

on the
x-Axis

b.2)

Cylinder Shell Method



$V = \int A = 2\pi r h$

Constant
On the
y-Axis

Height
radius

Note: drawing
a line Parallel
to y-Axis
مخطط على شكل المستطابق