

MTH101

Calculus And Analytical Geometry

Formula Sheet

3 Chapters, 29 Formulas

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of $f(x)$

$$\text{of } f(x) = 1/x.$$

Let h

Let $h = x - c$. So $x = h + c$. Then x

Perimeter

$$\text{Perimeter} = 100\text{ft} = 2x + 2y$$

V

$$V = 19600/27 \text{ is max when } x = 10/3.$$

$f(2)$

$$f(2) = \sin(2) = 0$$

b) such that $v / (c)$

b) such that $v / (c) = 0$. But note that

$A(1)$

$$A(1) = 1/3 \text{ units}$$

Define a new summation index j by the following formula

$$j = k - 3 \Rightarrow k = j + 3$$

Works with $<, > <$

Works with $<, > \leq$ also

y

$$y = \cos(x) \text{ over the interval } [0, 2]$$

and y

$$\text{and } y = x + 6.$$

First we need to know where the two curves intersect.

Let's write down $y = x - 2$ as $x = y + 2$ and then equate

The lower boundary has two pieces

1) $y = -(x)$ for x between -1 and 0

2) y

2) $y = x - 2$ for x between 1 and 4

$f(x)$

$$f(x) = + (x), g(x) = - (x), a = 0, b = 1$$

$f(x)$

$$f(x) = + (x), g(x) = x - 2, a = 1, b = 4$$

Total area or region is $19/6 + 4/3$

$$\text{Total area or region is } 19/6 + 4/3 = 9/2$$

and y

$$\text{and } y = x - 2 \text{ or } x = y + 2$$

V

$$V = 2 (\text{average radius}) \cdot (\text{height}) \cdot (\text{thickness})$$

W

$$W = F \cdot d \Rightarrow \text{Work} = \text{Force} \times \text{distance}$$

Pressure is defined as Force per unit Area.

$$P = F / A = ph$$

is also a convergent series (a

is also a convergent series ($a = 2, r = 1/5$).

(a) If < 1 , the series converges.

(b) If > 1 or $= +$, the series diverge.

(a) If < 1 , the series converges.

(d) If > 1 or $= +$, the series diverge.

(b) If > 1 or

(b) If > 1 or $= +$, then the series

$>$. The test is inconclusive if $|x|$

$>$. The test is inconclusive if $|x| = 1$ (i.e. $x = 1$ or $x = -1$),
so

$(-1, 1)$, and the radius of convergence is R

$(-1, 1)$, and the radius of convergence is $R = 1$.

$P(x)$

$$P(x) = c_0 + c_1x + c_2x^2 + \dots + c_nx^n (1)$$

$P(x)$

$$P(x) = c_0 + c_1 (x-a) + c_2 (x-a)^2 + \dots + c_n (x-a)^n$$

Good Luck!

Keep practicing!