

2003

$$1 \quad \quad \quad 4 \quad \quad \quad , \quad \quad \quad .$$

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$$y-a^x \qquad\qquad y-\log_a x \qquad\qquad a=0 \qquad a=1$$

$$y-x-y-x^2-y-x^3-y-\frac{1}{x}y-x^{\frac{1}{2}}$$





*A*

$$y = A \sin(-x - \pi)$$

$$y = A \sin(-x - \pi)$$

$$n$$

$$\frac{a-b}{2} - \sqrt{ab} \quad\quad (a-0,b-0)$$

$$p-q$$

$$y - C = C \quad y - x = y - x^2 = y - \frac{1}{x}$$

$$\begin{array}{ll} (C) & 0 = C \\ (\sin x) & \cos x = (\cos x) = \sin x \\ (\mathrm{e}^x) & \mathrm{e}^x = (a^x) = a^x \ln a = a = 0 = a = 1 \\ (\ln x) & \frac{1}{x} = (\log_a x) = \frac{1}{x} \log_a \mathrm{e} = a = 0 = a = 1 \end{array}$$

$$\begin{aligned} [u(x) & v(x)] &= u'(x) & v'(x) \\ [u(x)v(x)] &= u'(x)v(x) + u(x)v'(x) \\ \frac{u(x)}{v(x)} &= \frac{u'(x)v(x) - u(x)v'(x)}{v^2(x)} & v(x) = 0 \end{aligned}$$

$$\begin{vmatrix} a & b \end{vmatrix} \quad \begin{vmatrix} a \end{vmatrix} \quad \begin{vmatrix} b \end{vmatrix}$$

$$\begin{vmatrix} a & b \end{vmatrix} \quad \begin{vmatrix} a & c \end{vmatrix} \quad \begin{vmatrix} c & b \end{vmatrix}$$

$$\begin{vmatrix} ax & b \end{vmatrix} \quad c \quad \begin{vmatrix} ax & b \end{vmatrix} \quad c \quad \begin{vmatrix} x & a \end{vmatrix} + \begin{vmatrix} x & b \end{vmatrix} \quad c$$

$$\begin{array}{ccccccccc} & | & | & | & | & | & | \\ (a^2 - b^2)(c^2 - d^2) - (ac - bd)^2 & & & & & & & \\ \sqrt{(x_1 - x_2)^2 - (y_1 - y_2)^2} & \sqrt{(x_2 - x_3)^2 - (y_2 - y_3)^2} & \sqrt{(x_1 - x_3)^2 - (y_1 - y_3)^2} & & & & & \\ \end{array}$$

$$\sum_{i=1}^n a_i^2 - \sum_{i=1}^n b_i^2 = (\sum_{i=1}^n a_i b_i)^2$$

$$\frac{(1-x)^n-1-nx}{n}=x-1-x=0-n$$