

Calculus

Definite integrals, indefinite integrals, limits, differentiation, and logarithms.

1. Definite integrals

TI-84 Plus calculator screen showing the definite integral of x^5 from 1 to 6. The result is $\frac{46655}{6}$.

2. Definite integrals for patterns

Two TI-84 Plus calculator screens showing the definite integral of x^5 from 1 to n . The first screen shows the result $\frac{n^6}{6} - \frac{1}{6}$. The second screen shows the result $\frac{-m^6 + n^6}{6}$.

TI-84 Plus calculator screen showing the definite integral of $\sin(x)$ from m to n . The result is $\cos(m) - \cos(n)$.

3. Limits

Two TI-84 Plus calculator screens showing the limit of $\frac{x^2 - 5x}{x}$. The first screen shows the limit as $x \rightarrow 0$ is -5 . The second screen shows the limit as $x \rightarrow b$ is $\frac{b^2 - 5b}{b}$.

4. Differentiation

TI-84 Plus calculator screen showing the derivative of x^n . The result is $n \cdot x^{n-1}$.

5. Logarithms

TI-84 Plus calculator screen showing the logarithm of a product: $\log(a) + \log(b)$.