Calculus

```
ans := diff(x*sin(x),x):                    # mpl (ans.501,ans)
ans := eval(diff(x*sin(x),x),x=Pi/4):       # mpl (ans.502,ans)
ans := int(2*sin(x)^2, x=a..b):             # mpl (ans.503,ans)
ans := int(2*exp(-x^2),x=0..infinity):      # mpl (ans.504,ans)
ans := ''int(2*exp(-x^2),x=0..infinity)'':  # mpl (lhs.504,ans)
ans := int(int(x^2 + y^2,  y=0..x),x=0..1): # mpl (ans.505,ans)
ans := ''int(int(x^2 + y^2,  y=0..x),x=0..1)'':  # mpl (lhs.505,ans)
```

$$\texttt{ans.501} := \sin(x) + x\cos(x)$$

$$\texttt{ans.502} := \frac{1}{2}\sqrt{2} + \frac{1}{8}\pi\sqrt{2}$$

$$\texttt{ans.503} := \sin(a)\cos(a) - a - \sin(b)\cos(b) + b$$

$$\int_0^\infty 2\,e^{-x^2}\,\mathrm{d}x = \sqrt{\pi} \tag{ans.504}$$

$$\int_0^1 \int_0^x x^2 + y^2\,\mathrm{d}y\,\mathrm{d}x = \frac{1}{3} \tag{ans.505}$$