```
> f:=(X->exp(-1/X^2));
```

$$f := X \rightarrow e^{-\frac{1}{X^2}} \tag{1}$$

```
> d1:=diff(f(x),x);
```

$$d1 := \frac{2\,e^{-\frac{1}{x^2}}}{x^3} \tag{2}$$

```
> d2:=diff(d1,x);
```

$$d2 := -\frac{6\,e^{-\frac{1}{x^2}}}{x^4} + \frac{4\,e^{-\frac{1}{x^2}}}{x^6} \tag{3}$$

```
> d3:=diff(d2,x);
```

$$d3 := \frac{24\,e^{-\frac{1}{x^2}}}{x^5} - \frac{36\,e^{-\frac{1}{x^2}}}{x^7} + \frac{8\,e^{-\frac{1}{x^2}}}{x^9} \tag{4}$$
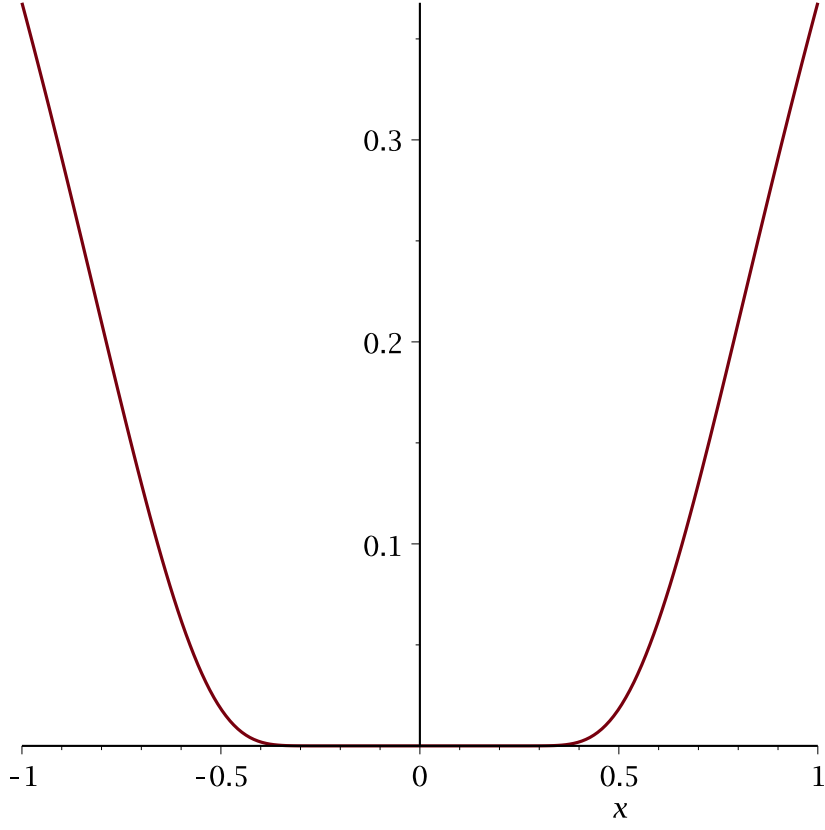
```
> d4:=diff(d3,x);
```

$$d4 := -\frac{120\,e^{-\frac{1}{x^2}}}{x^6} + \frac{300\,e^{-\frac{1}{x^2}}}{x^8} - \frac{144\,e^{-\frac{1}{x^2}}}{x^{10}} + \frac{16\,e^{-\frac{1}{x^2}}}{x^{12}} \tag{5}$$

```
> d5:=diff(d4,x);
```

$$d5 := \frac{720\,e^{-\frac{1}{x^2}}}{x^7} - \frac{2640\,e^{-\frac{1}{x^2}}}{x^9} + \frac{2040\,e^{-\frac{1}{x^2}}}{x^{11}} - \frac{480\,e^{-\frac{1}{x^2}}}{x^{13}} + \frac{32\,e^{-\frac{1}{x^2}}}{x^{15}} \tag{6}$$