

```
> f := exp
```

$$f := \exp$$

(1)

```
> T2f := unapply(convert(taylor(f(x), x=0, 3), polynom), x)
```

$$T2f := x \rightarrow 1 + x + \frac{1}{2} x^2$$

(2)

```
> T3f := unapply(convert(taylor(f(x), x=0, 4), polynom), x)
```

$$T3f := x \rightarrow 1 + x + \frac{1}{2} x^2 + \frac{1}{6} x^3$$

(3)

```
> T4f := unapply(convert(taylor(f(x), x=0, 5), polynom), x)
```

$$T4f := x \rightarrow 1 + x + \frac{1}{2} x^2 + \frac{1}{6} x^3 + \frac{1}{24} x^4$$

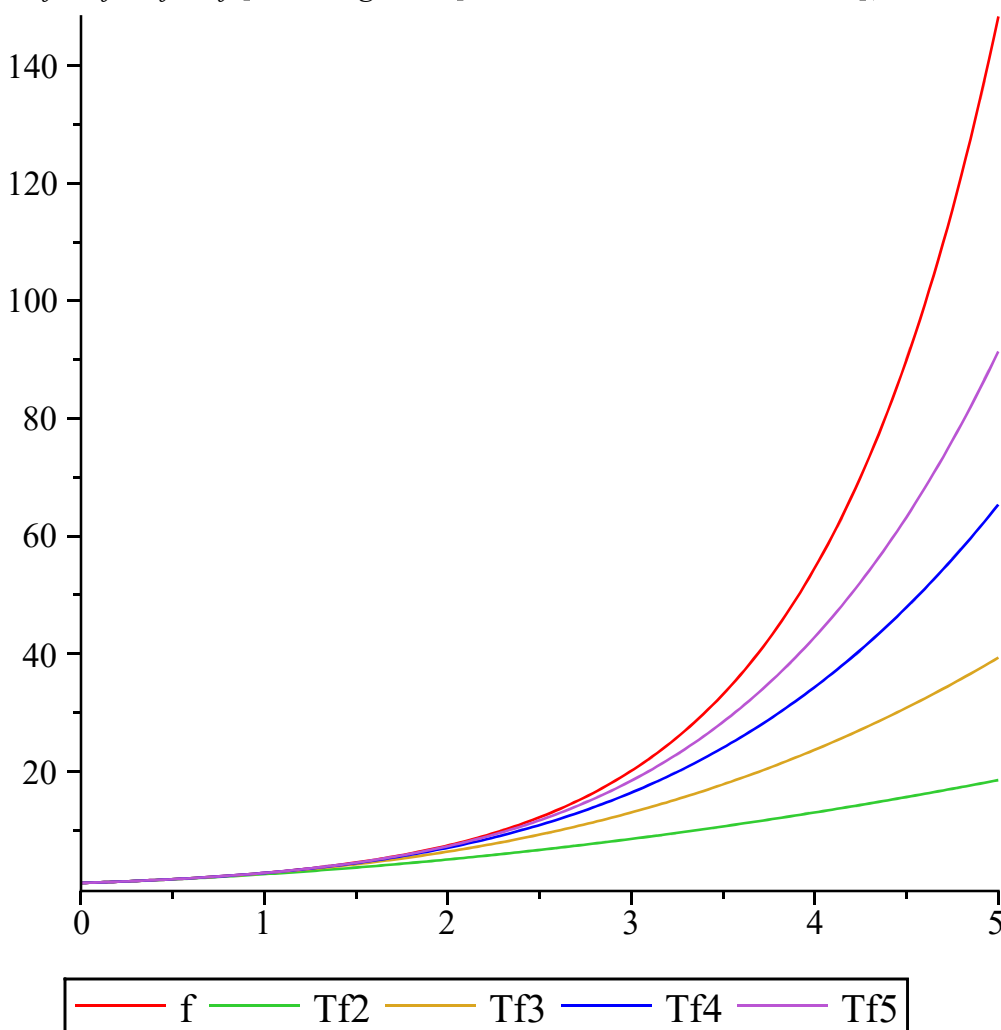
(4)

```
> T5f := unapply(convert(taylor(f(x), x=0, 6), polynom), x)
```

$$T5f := x \rightarrow 1 + x + \frac{1}{2} x^2 + \frac{1}{6} x^3 + \frac{1}{24} x^4 + \frac{1}{120} x^5$$

(5)

```
> plot([f, T2f, T3f, T4f, T5f], 0..5, legend=["f", "Tf2", "Tf3", "Tf4", "Tf5"])
```



```
> g := x → ln(1 + x)
```

$$g := x \rightarrow \ln(1 + x)$$

(6)

```
> T2g := unapply(convert(taylor(g(x), x=0, 3), polynom), x)
```

$$T2g := x \rightarrow x - \frac{1}{2} x^2 \quad (7)$$

>  $T3g := \text{unapply}(\text{convert}(\text{taylor}(g(x), x=0, 4), \text{polynom}), x)$

$$T3g := x \rightarrow x - \frac{1}{2} x^2 + \frac{1}{3} x^3 \quad (8)$$

>  $T4g := \text{unapply}(\text{convert}(\text{taylor}(g(x), x=0, 5), \text{polynom}), x)$

$$T4g := x \rightarrow x - \frac{1}{2} x^2 + \frac{1}{3} x^3 - \frac{1}{4} x^4 \quad (9)$$

>  $T5g := \text{unapply}(\text{convert}(\text{taylor}(g(x), x=0, 6), \text{polynom}), x)$

$$T5g := x \rightarrow x - \frac{1}{2} x^2 + \frac{1}{3} x^3 - \frac{1}{4} x^4 + \frac{1}{5} x^5 \quad (10)$$

>  $\text{plot}([f, T2g, T3g, T4g, T5g], 0..5, \text{legend}=["g", "Tg2", "Tg3", "Tg4", "Tg5"])$

