```
> restart:
> f := x→(x+4)^(3/2)
```

$$f := x \mapsto (x+4)^{3/2} \quad (1)$$

```
> first_term := subs(x=0, diff(f(x), x$1))
```

$$first\_term := \frac{3\sqrt{4}}{2} \quad (2)$$

```
> second_term := 1/2 · subs(x=0, diff(f(x), x$2))
```

$$second\_term := \frac{3\sqrt{4}}{32} \quad (3)$$

```
> err := 1/6 · abs(subs(x=0, diff(f(x), x$3)))
```

$$err := \frac{\sqrt{4}}{256} \quad (4)$$

```
> t := 8 + first_term·x + second_term·x^2 + err·x^3
```

$$t := \frac{\sqrt{4}\,x^3}{256} + \frac{3x^2\sqrt{4}}{32} + \frac{3x\sqrt{4}}{2} + 8 \quad (5)$$

```
> x_1 := evalf(subs(x=1, t))
```

$$x\_1 := 11.19531250 \quad (6)$$

```
> error_val := evalf(err)
```

$$error\_val := 0.007812500000 \quad (7)$$

```
> x_2 := evalf(subs(x=2, t))
```

$$x\_2 := 14.81250000 \quad (8)$$

```
> error_val_2 := evalf(err·8)
```

$$error\_val\_2 := 0.06250000000 \quad (9)$$

```
>
```