

with(plots) :
 $f := x \rightarrow \arcsin(3 \cdot x)$

$$f := x \mapsto \arcsin(3 x) \quad (1)$$

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

$$f := x \mapsto \ln(x + 1) \quad (2)$$

$\sum_{k=1}^2 f^{(k)}(x)$

$$\frac{1}{x + 1} - \frac{1}{(x + 1)^2} \quad (3)$$

$f := x \rightarrow x + \exp(-x)$

$$f := x \mapsto x + e^{-x} \quad (4)$$

$f :=$

$f := x \rightarrow \frac{\ln(2 \cdot x)}{3 \cdot x}$

$$f := x \mapsto \frac{\ln(2 x)}{3 x} \quad (5)$$

$f(x)$

$$\arcsin(3 x) \quad (6)$$

$a := 0$

$$a := 0 \quad (7)$$

$$a := \frac{1}{2} \quad (8)$$

$n := 2$

$$n := 2 \quad (9)$$

$Tn := x \rightarrow \text{sort}\left(\sum_{k=0}^n \frac{f^{(k)}(a) \cdot (x - a)^k}{k!}\right) :$

$Tn(x)$

$$-\frac{1}{2} x^2 + x \quad (10)$$

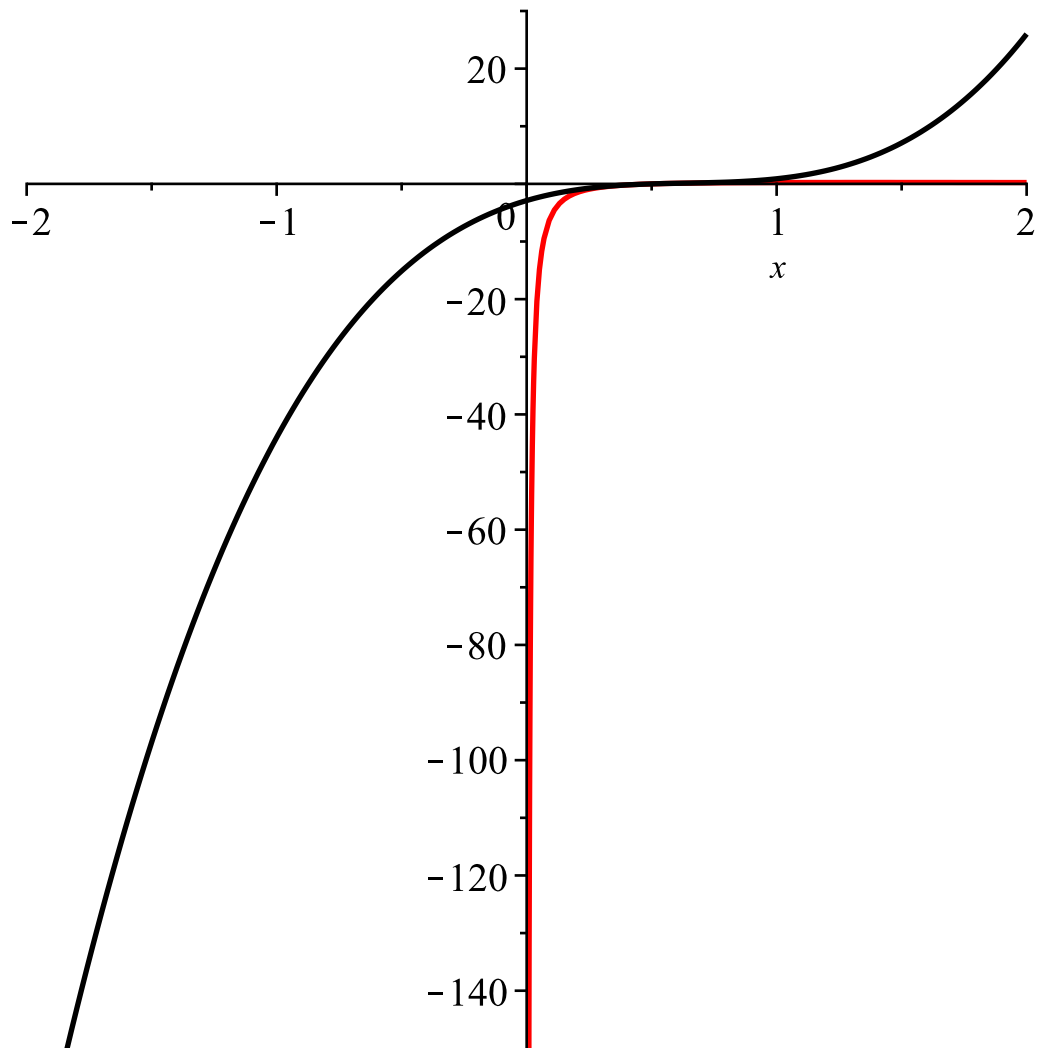
$f(0.4)$

$$0.3364722366 \quad (11)$$

$Tn(0.4)$

$$-0.5108256238 \quad (12)$$

$\text{plot}([f(x), Tn(x)], x = -2..2, \text{color} = [\text{red}, \text{black}], \text{thickness} = [2, 2])$



$f(x)$

$$\ln(x + 1)$$

(13)

$Tn(x)$

$$-\frac{1}{4}x^4 + \frac{1}{3}x^3 - \frac{1}{2}x^2 + x$$

(14)

$\ln(1.4)$

$$0.3364722366$$

(15)

$Tn(0.4)$

$$0.3364722366$$

(16)