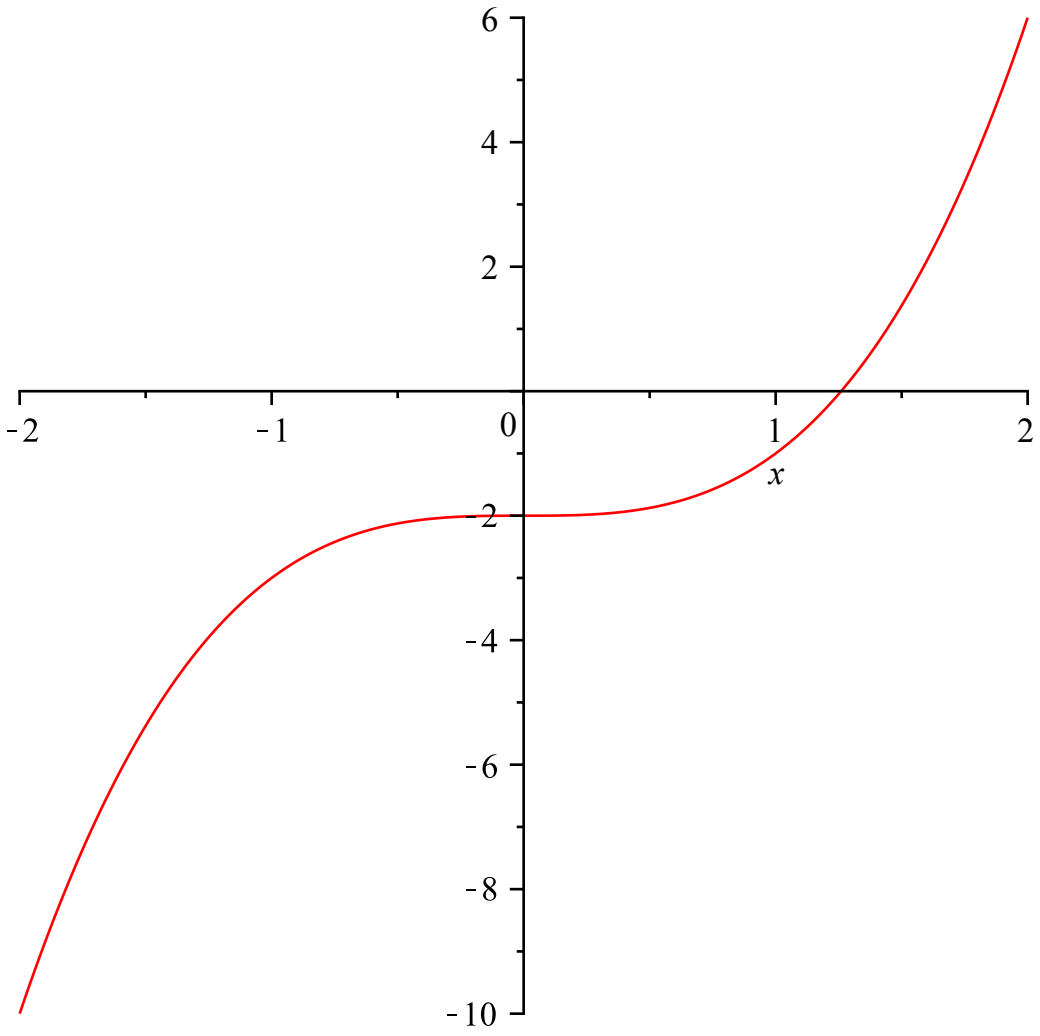
Opgave 3.2.9

```
> f := x→x^3 − 2; fp := D(f);
```

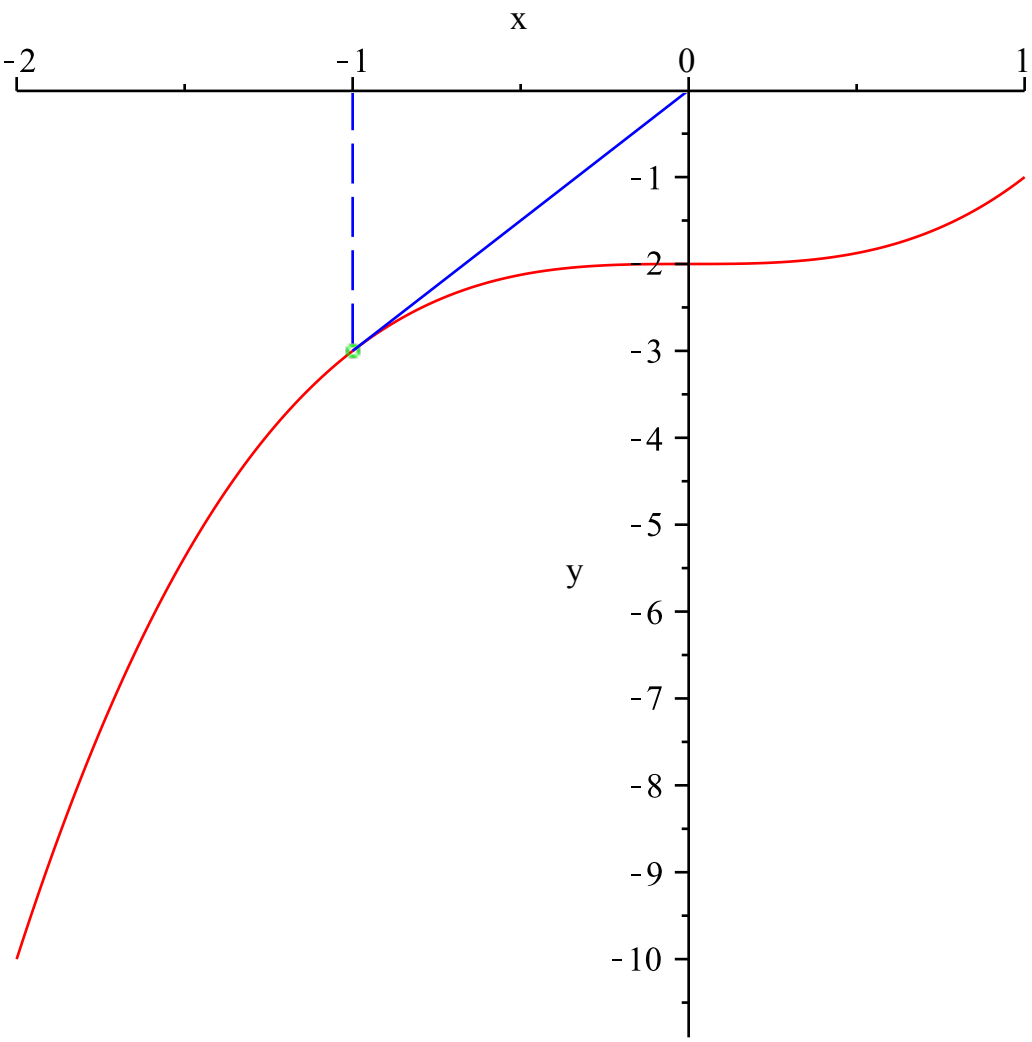
$$f := x \to x^3 - 2$$

$$fp := x \to 3\,x^2 \qquad \textbf{(1.1)}$$

```
> plot(f(x), x = -2 ..2)
```




```
> with(Student[Calculus1]):
> NewtonsMethodTutor(f(x), 1);
```



> **Vi kunne også udregne hvert step selv:**

> $Newton := x \rightarrow evalf\left(x - \frac{f(x)}{fp(x)}\right)$

$$Newton := x \rightarrow evalf\left(x - \frac{f(x)}{fp(x)}\right) \quad \textbf{(1.2)}$$

> $Newton(-1)$

$$0. \quad \textbf{(1.3)}$$

> $Newton(0)$

Error, (in Newton) numeric exception: division by zero

> **Newtons metode får aldrig en x[2] værdi da den bliver ∞ grundet division med 0.**