```
> restart;
> f := x -> sqrt(3*x+2);
```

$$f := x \rightarrow \sqrt{3\,x+2}$$

```
> f(2);
```

$$2\sqrt{2}$$

```
> f(2)^2;
```

$$8$$

```
> f(2^2);
```

$$\sqrt{14}$$

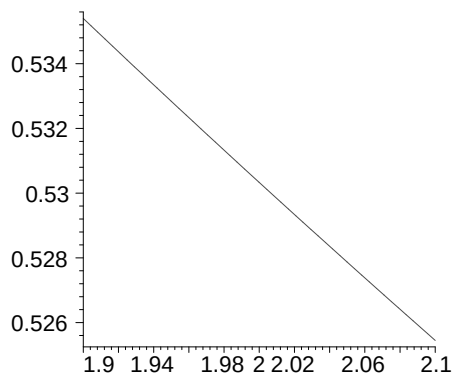
```
> mSEC := t -> ( f(t)-f(2) )/(t-2);
```

$$mSEC := t \rightarrow \frac{\mathrm{f}(t)-\mathrm{f}(2)}{t-2}$$

```
> # Narrow-window plot
> interval := 2-1/10..2+1/10;
```

$$interval := \frac{19}{10} .. \frac{21}{10}$$

```
> plot(mSEC, interval);
```




```
> # The value of mTAN appears to be about 0.53.
> ##############  Exact-algebra mTAN
> # Like your #5 work.
> mTAN := limit( mSEC(t), t=2  );
```

$$mTAN := \frac{3\sqrt{2}}{8}$$

```
> approx_mTan := evalf( mTAN );
```

$$approx_mTan := 0.5303300858$$

```
>
```

```
> ###########################
> # Go for the tangent-line equation
> Xpot := 2;  # x-coordinate of the POT
```

$$Xpot := 2$$

```
> Ypot := f(Xpot);
```

$$Ypot := 2\sqrt{2}$$

```
> TLE := y = Ypot + mTAN*(x - Xpot);
```

$$TLE := y = 2\sqrt{2} + \frac{3\sqrt{2}\,(x-2)}{8}$$

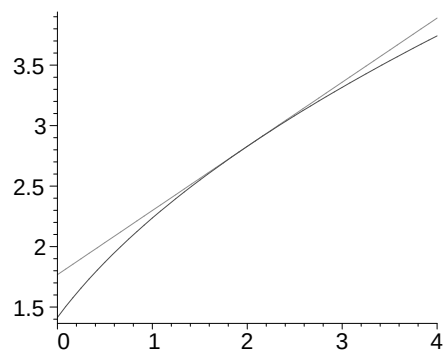
```
> simplify(%);
```

$$y = \frac{5\sqrt{2}}{4} + \frac{3\sqrt{2}\,x}{8}$$

```
> TLF := x -> Ypot + mTAN*(x - Xpot);
```

$$TLF := x \rightarrow Ypot + mTAN\,(x - Xpot)$$

```
>
> plot([f, TLF], 0..4);
```




```
>
```