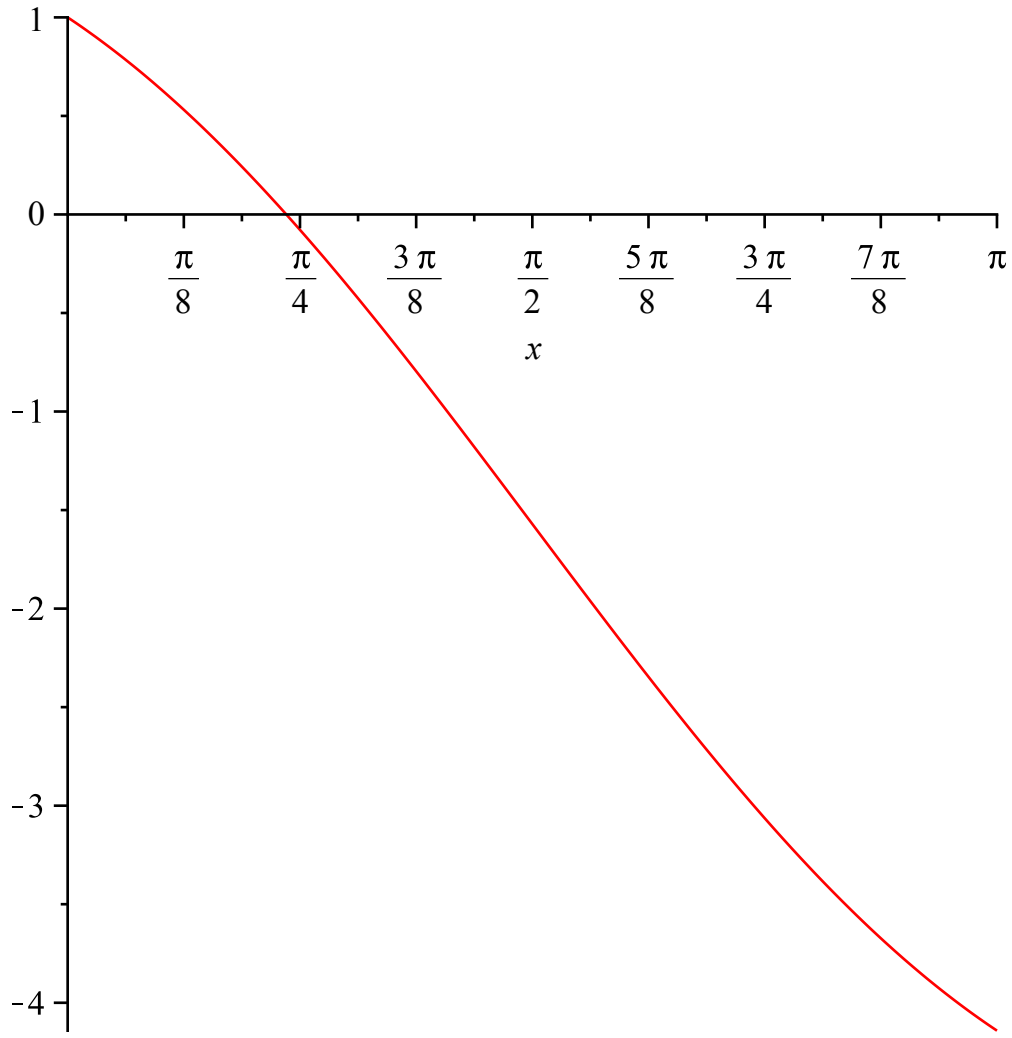
```
> restart;
> f:=cos(x)-x;
```

$$f := \cos(x) - x \tag{1}$$

```
> plot(f,x=0..Pi);
```




```
> df:=diff(f,x);
```

$$df := -\sin(x) - 1 \tag{2}$$

```
> phi:=unapply(x-f/df,x);
```

$$\phi := x \to x - \frac{\cos(x) - x}{-\sin(x) - 1} \tag{3}$$

```
> phi(2);
```

$$2 - \frac{\cos(2) - 2}{-\sin(2) - 1} \tag{4}$$

```
> x1:=0.75;
```

$$x1 := 0.75 \tag{5}$$

```
> x2:=phi(x1);
```

$$x2 := 0.7391111388 \tag{6}$$

```
> x3:=phi(x2);
```

$$x3 := 0.7390851334 \tag{7}$$

```
> x4:=phi(x3);
```

$$x4 := 0.7390851332 \quad (8)$$

```
> x5:=phi(x4);
```

$$x5 := 0.7390851332 \quad (9)$$

```
> Digits:=80;
```

$$Digits := 80 \quad (10)$$

```
> x5:=phi(x4);
```

$$x5 := 0.73908513321516064165536283870231675895296413063986785751841503533639886191829002 \quad (11)$$

```
> x6:=phi(x5);
```

$$x6 := 0.73908513321516064165531208767387340401341175946947861176797607154451351997998762 \quad (12)$$

```
> x7:=phi(x6);
```

$$x7 := 0.73908513321516064165531208767387340401341175890075746496568063577328465488354759 \quad (13)$$

```
> x8:=phi(x7);
```

$$x8 := 0.73908513321516064165531208767387340401341175890075746496568063577328465488354760 \quad (14)$$