Jalaseh 3

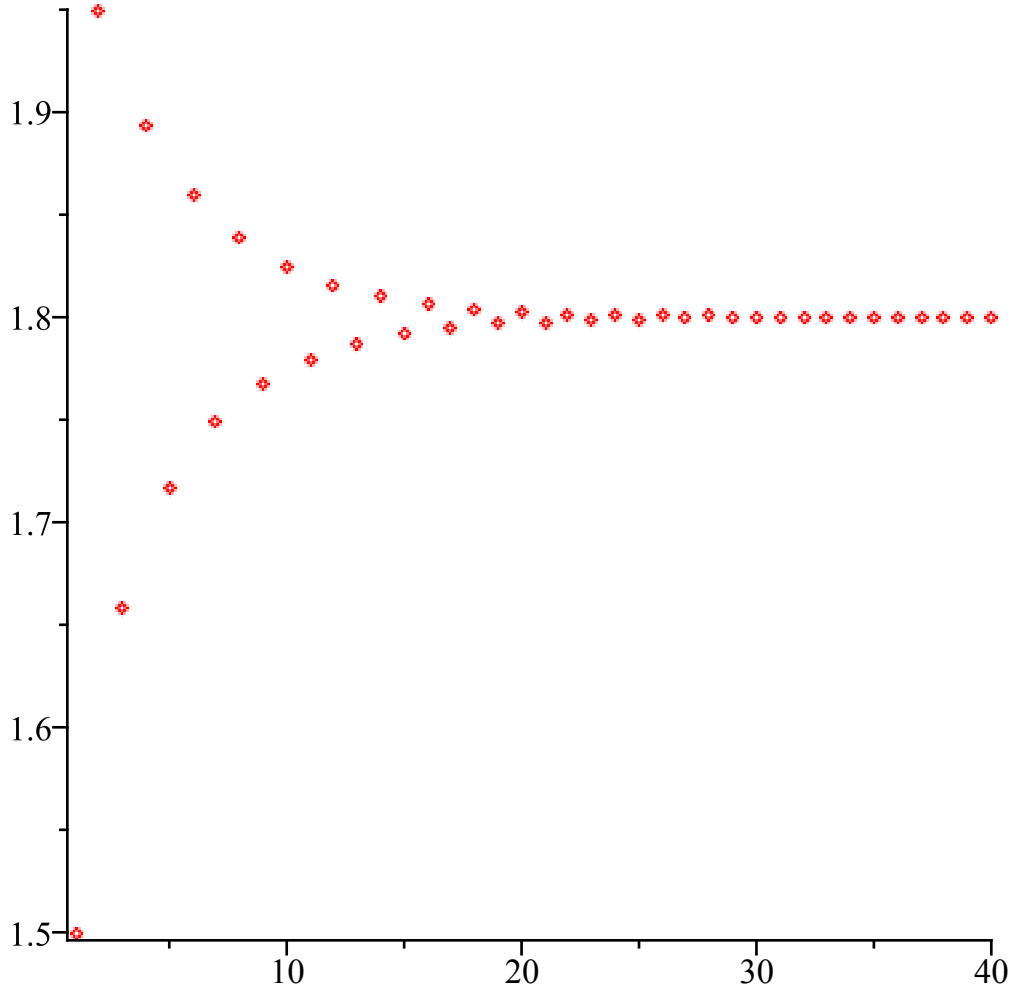
```
> f := x → 2.8·x − x^2;
```

$$f := x \to 2.8\,x - x^2 \tag{1}$$

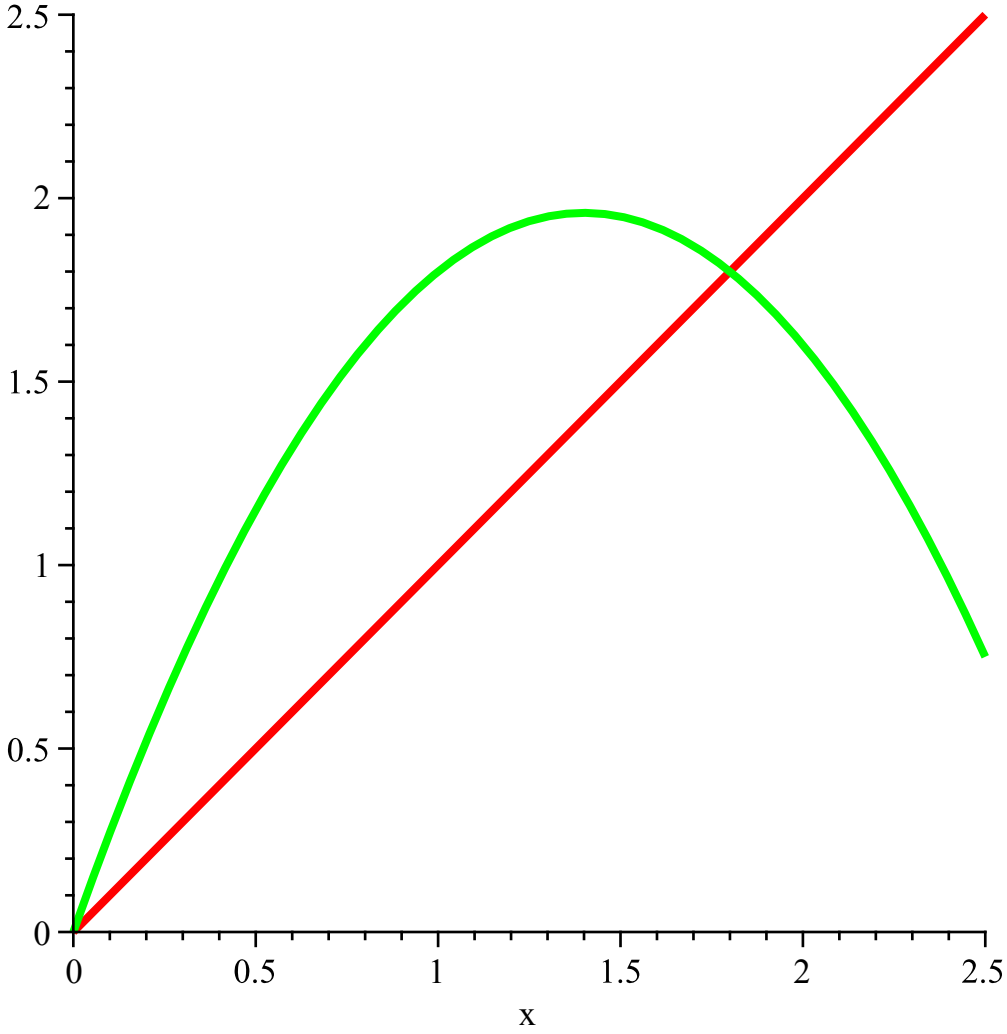
```
> a[1] := 1.5;
```

$$a_1 := 1.5 \tag{2}$$

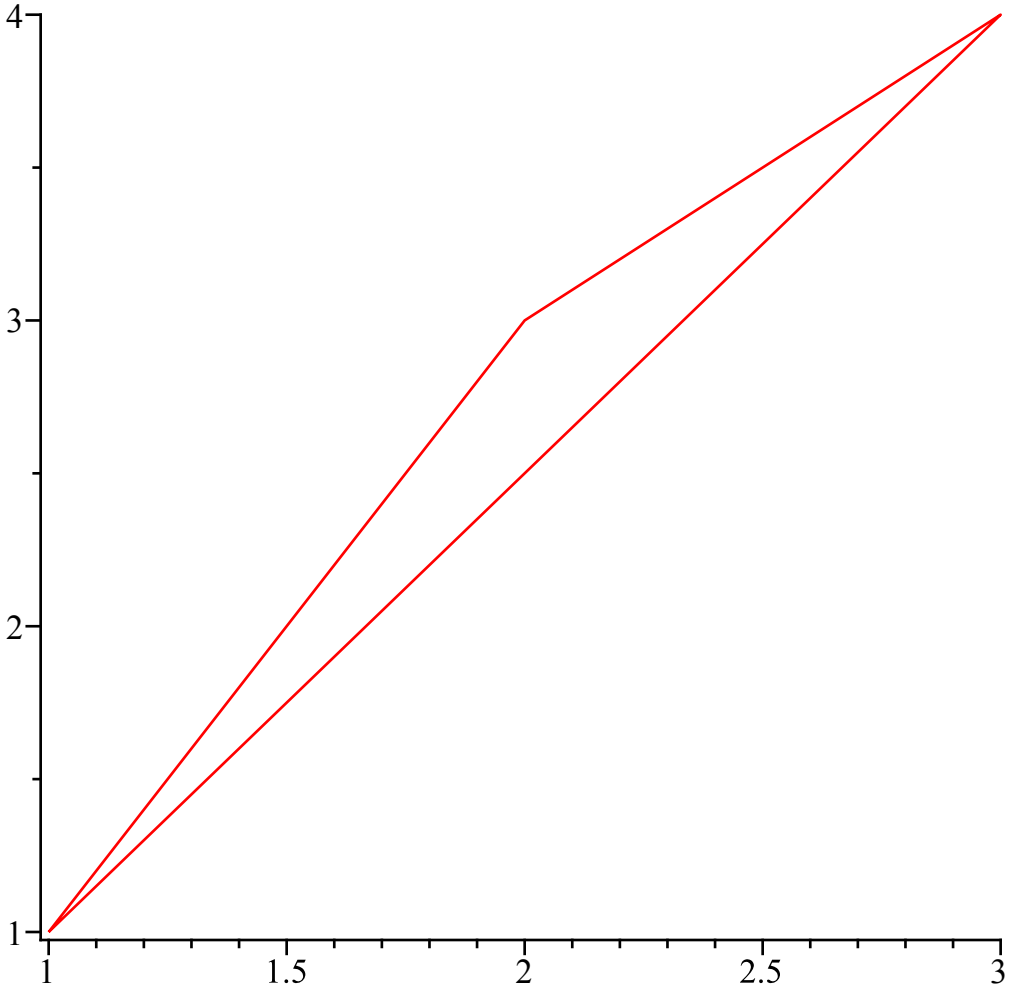
```
> for k from 1 to 40 do
    a[k+1] := f(a[k]) :
  od :
> plot([seq([k, a[k]], k = 1..40)], style = point);
```



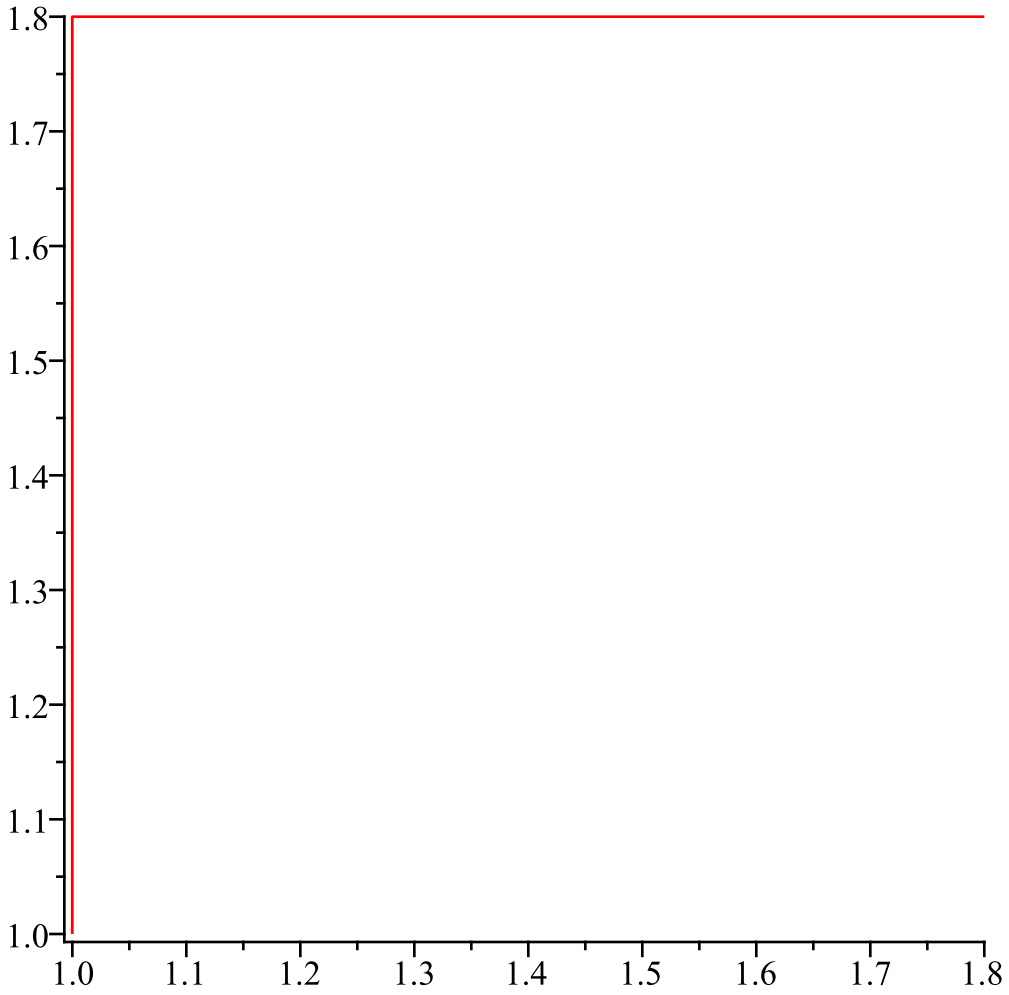

```
> with(plots, display) :
> p1 := plot({x, f(x)}, x = 0..2.5, thickness = 3) :
> display({p1});
```



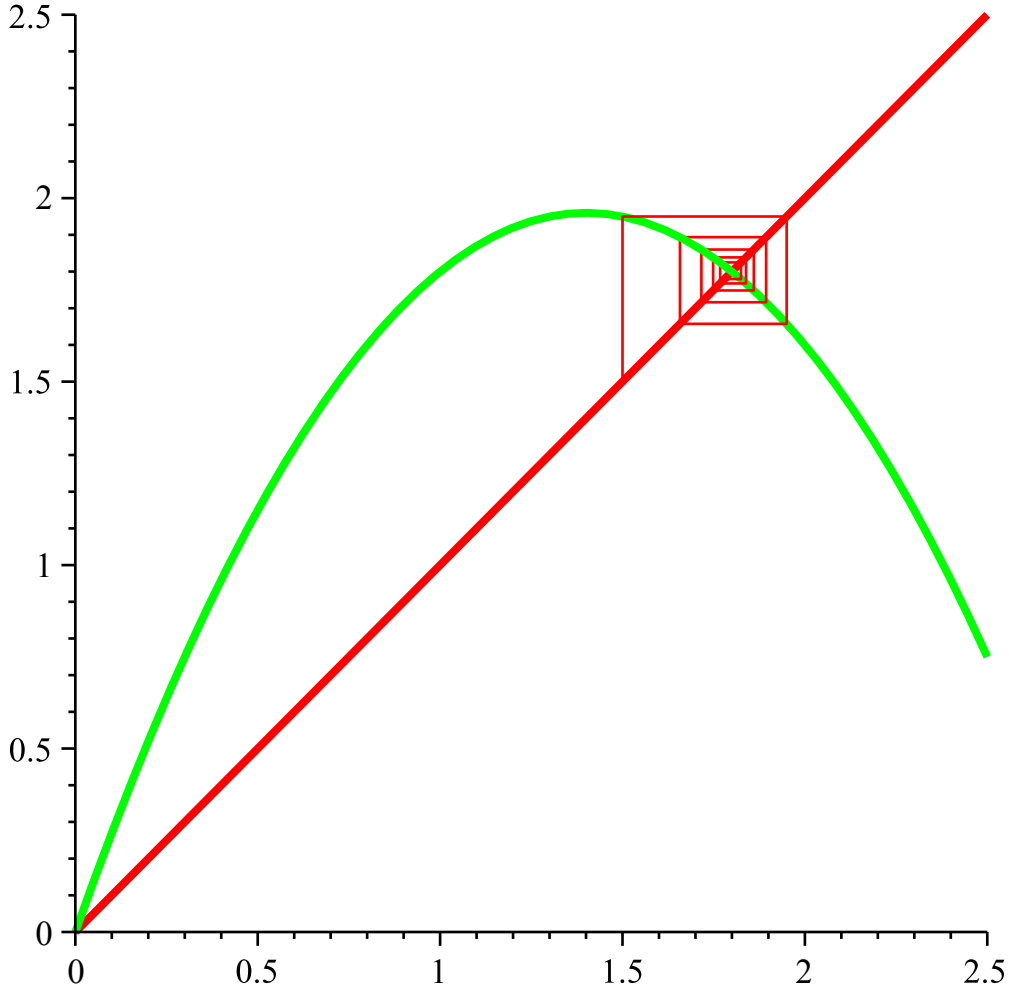

```
> plot([[1, 1], [2, 3], [3, 4], [1, 1]]);
```




```
> p2 := x → plot( [ [x, x], [x, f(x) ], [ f(x), f(x) ] ]) :
> p2(1);
```



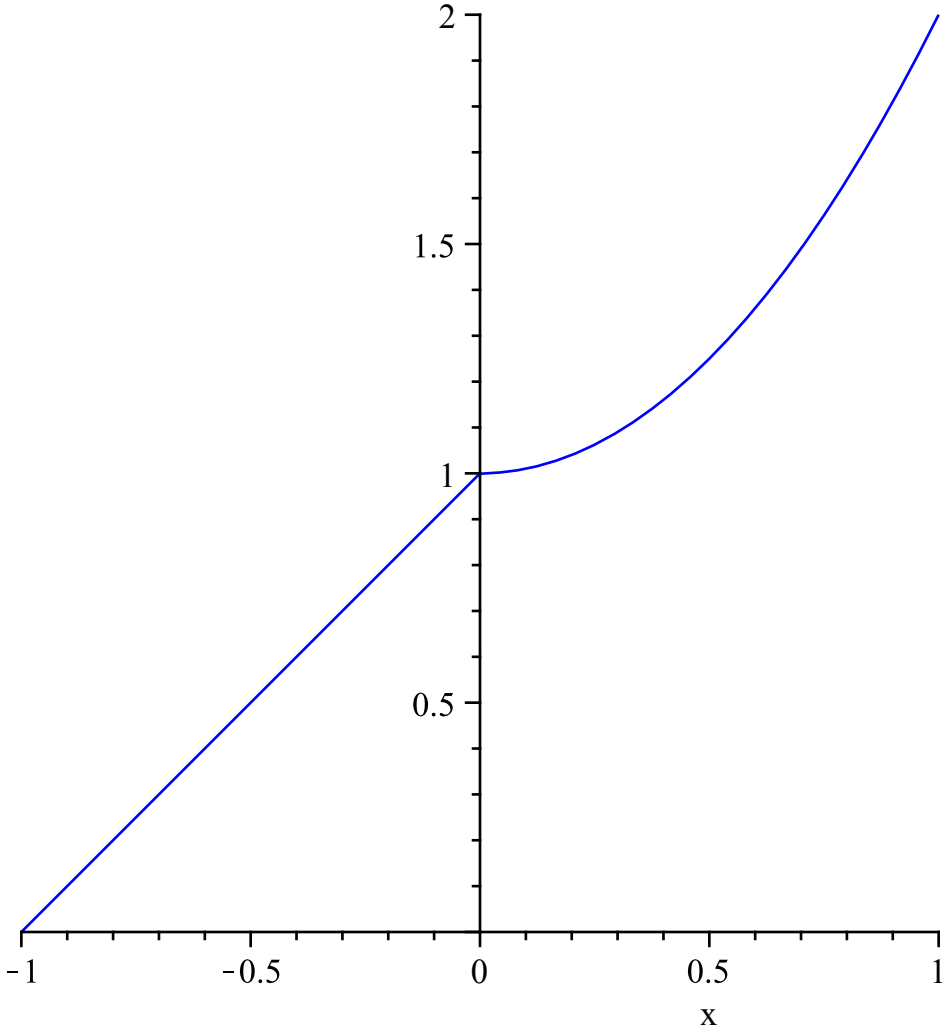

```
> display({p1, seq(p2(a[k]), k = 1 ..10)});
```



> $g := x \to piecewise(x <= 0, x + 1, x^2 + 1);$

$$g := x \to piecewise(x \leq 0, x + 1, x^2 + 1) \quad \textbf{(3)}$$

> $plot(g(x), x = -1..1, style = line, scaling = constrained, color = blue);$




```
> q := x^2 - 2*x + 1;
```

$$q := x^2 - 2\,x + 1 \tag{4}$$

```
> h := unapply(q, x);
```

$$h := x \to x^2 - 2\,x + 1 \tag{5}$$

```
> h(2);
```

$$1 \tag{6}$$

```
> apply(h, 2);
```

$$1 \tag{7}$$

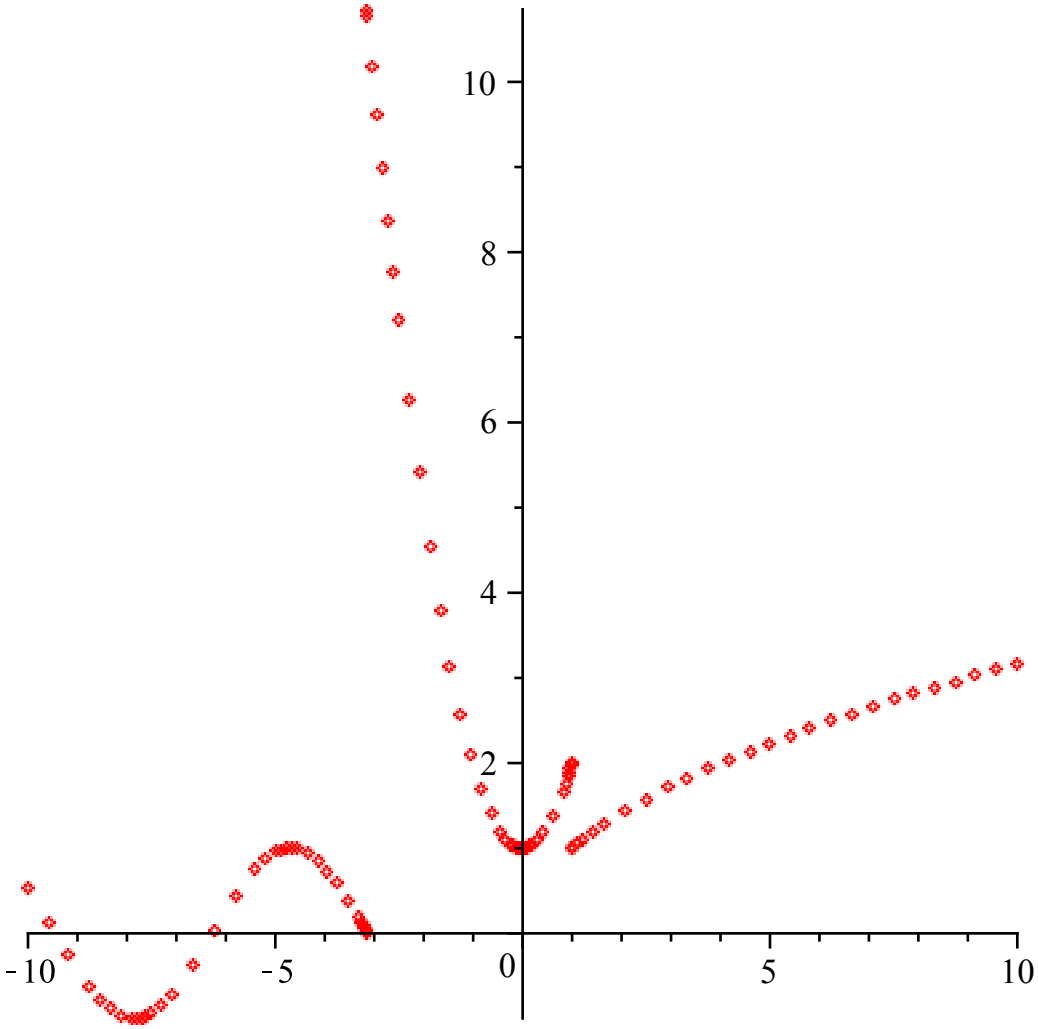
```
> p := piecewise(x < 0,-x, x > 0, x);
```

$$p := \begin{cases} -x & x < 0 \\ x & 0 < x \end{cases} \tag{8}$$

```
> k := x -> piecewise(x <=- Pi, sin(x), x <= 1, x^2 + 1, 1 < x, sqrt(x));
```

$$k := x \to piecewise\left(x \le -\pi, \sin(x), x \le 1, x^2 + 1, 1 < x, \sqrt{x}\right) \tag{9}$$

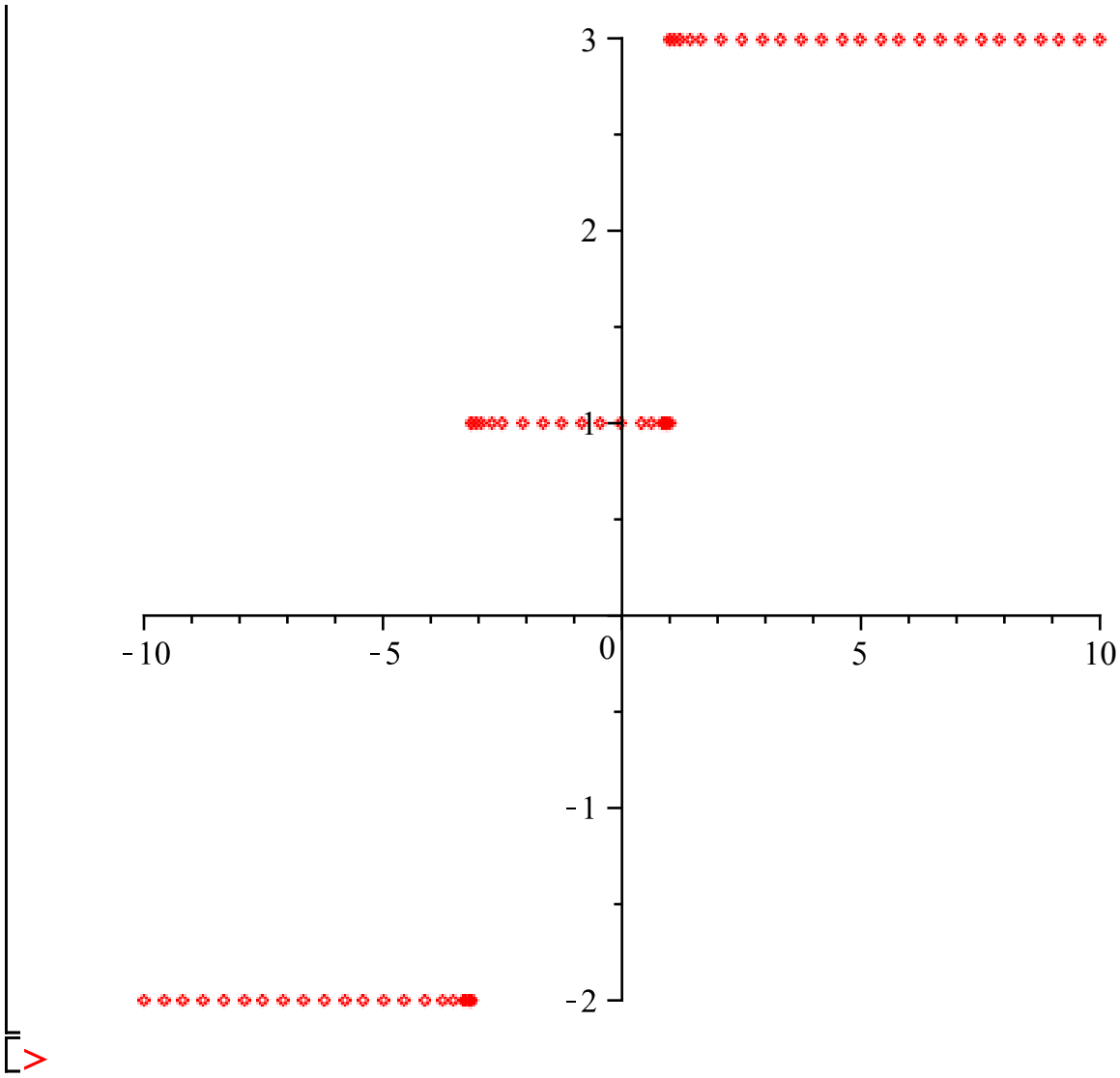
```
> plot(k, style=point);
```




```
> H := x → piecewise(x <= -π, -2, x <= 1, 1, 1 < x, 3);
```

$$H := x \rightarrow piecewise(x \leq -\pi, -2, x \leq 1, 1, 1 < x, 3) \quad \textbf{(10)}$$

```
> plot(H, style = point);
```


3
2
1
-1
-2
-10
-5
0
5
10