(1)

> $dsolve(diff(u(x), x\$2) + 5 \cdot diff(u(x), x) - 7 \cdot u(x) = 5 \cdot \cos(x) - 7 \sin(x), u(x))$

$$u(x) = e^{\frac{(-5+\sqrt{53})x}{2}} c_2 + e^{-\frac{(5+\sqrt{53})x}{2}} c_1 - \frac{5\cos(x)}{89} + \frac{81\sin(x)}{89} \quad (2)$$

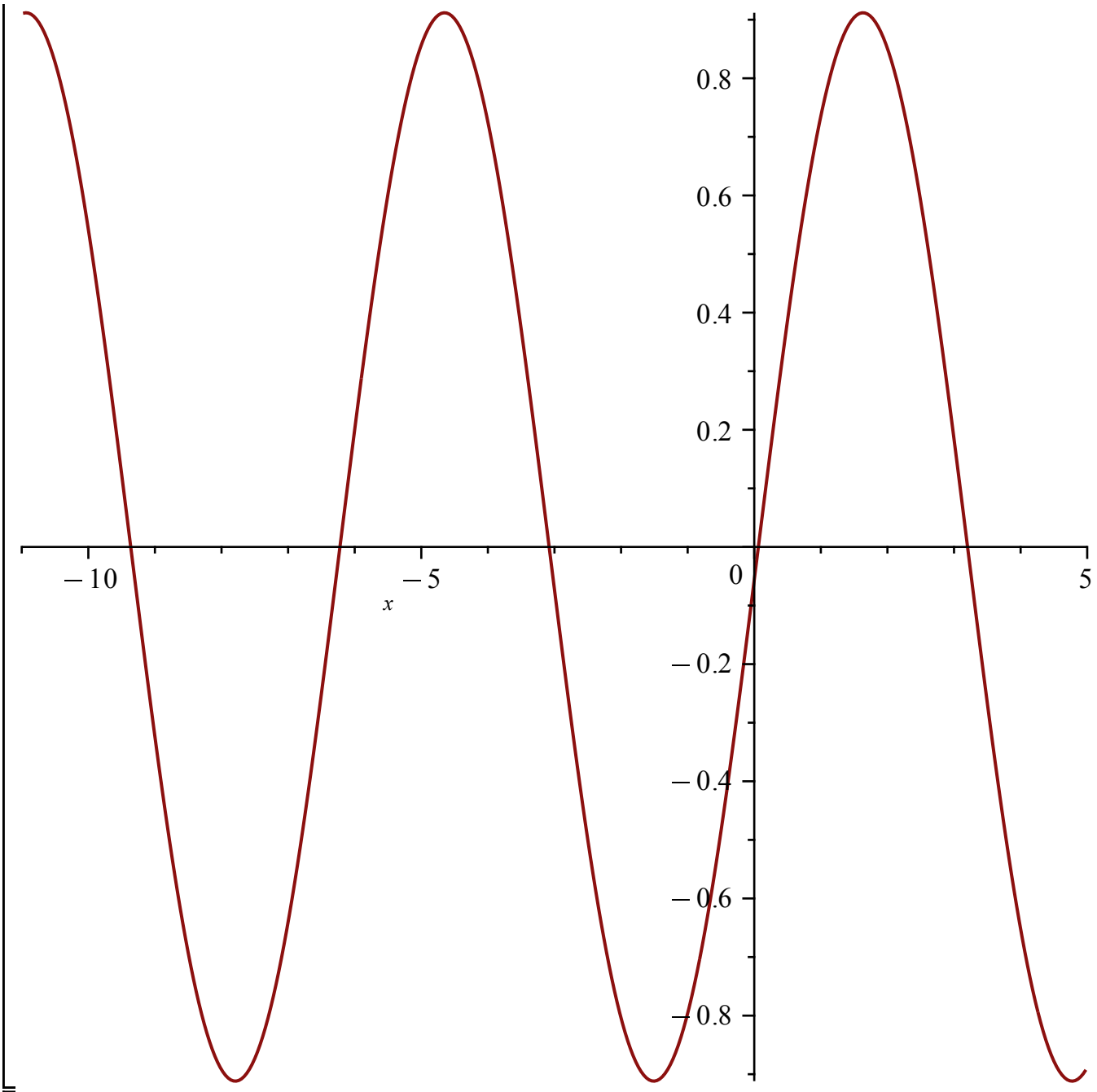
> $eq := -\frac{5\cos(x)}{89} + \frac{81\sin(x)}{89}$

$$eq := -\frac{5\cos(x)}{89} + \frac{81\sin(x)}{89} \quad (3)$$

> eq

$$-\frac{5\cos(x)}{89} + \frac{81\sin(x)}{89} \quad (4)$$

> $plot(eq, x = -11..5)$



> $f := x \mapsto -\frac{5\cos(x)}{89} + \frac{81\sin(x)}{89}$

$$f := x \mapsto -\frac{5 \cdot \cos(x)}{89} + \frac{81 \cdot \sin(x)}{89} \quad \textbf{(5)}$$

> $f(0)$

$$-\frac{5}{89} \quad \textbf{(6)}$$

> $f\left(\frac{\mathrm{Pi}}{2}\right)$

$$\frac{81}{89} \quad \textbf{(7)}$$

```
> evalf(f(Pi/2))
```

$$0.9101123596 \quad \textbf{(8)}$$

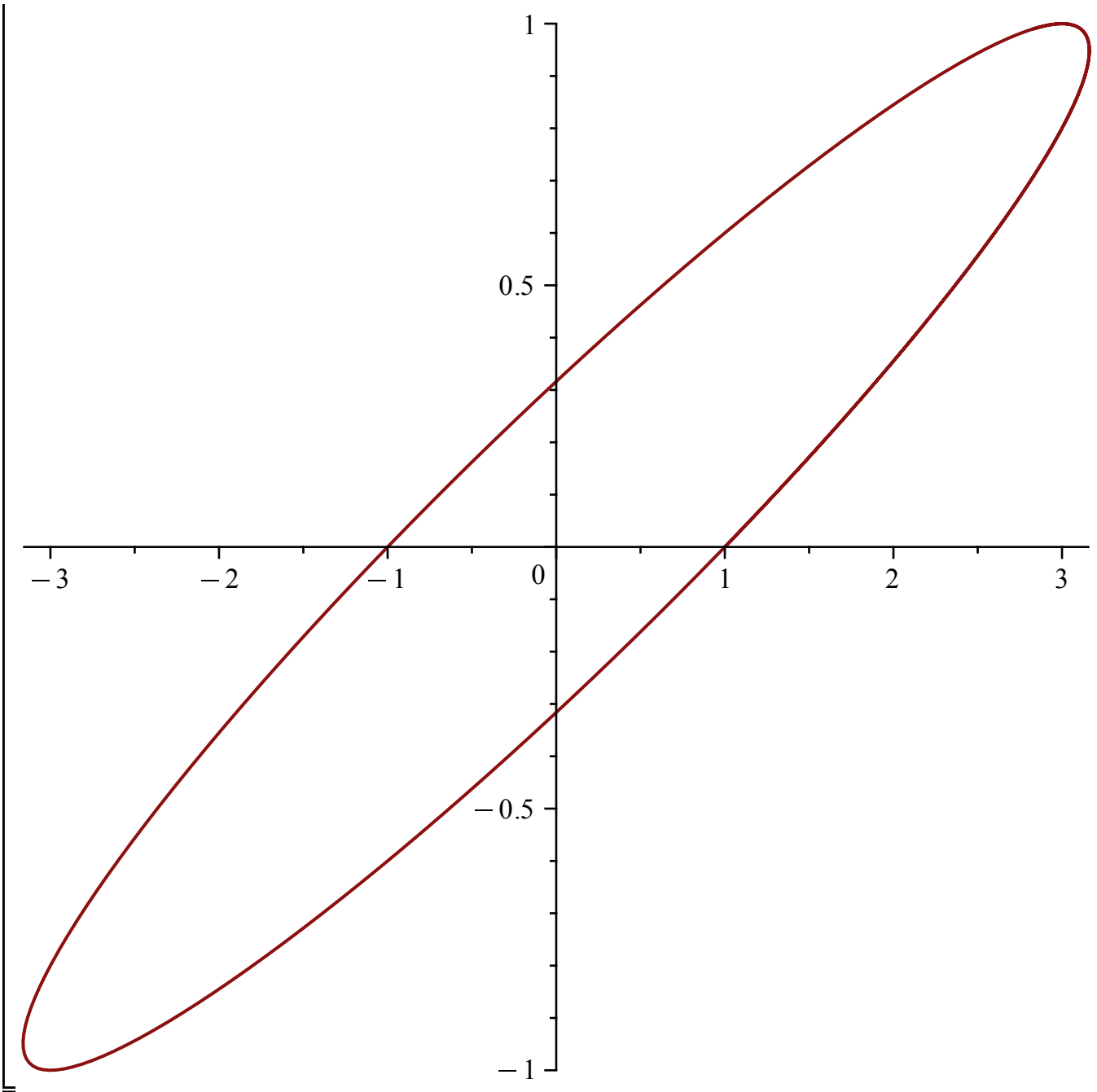
```
> D(f)(Pi/2)
```

$$\frac{5}{89} \quad \textbf{(9)}$$

```
> evalf(D(f)(Pi/2))
```

$$0.05617977528 \quad \textbf{(10)}$$

```
> plot([cos(2·t) + 3·sin(2·t), sin(2·t), t = 0..4])
```




```
> with(LinearAlgebra) : with(VectorCalculus)
```

[*&x*, `*`, `+`, `-`, `.`, *<,>*, *<|>*, *About*, *AddCoordinates*, *ArcLength*, *BasisFormat*, *Binormal*, **(11)**
ConvertVector, *CrossProduct*, *Curl*, *Curvature*, D, *Del*, *DirectionalDiff*, *Divergence*,
DotProduct, *Flux*, *GetCoordinateParameters*, *GetCoordinates*, *GetNames*, *GetPVDescription*,
GetRootPoint, *GetSpace*, *Gradient*, *Hessian*, *IsPositionVector*, *IsRootedVector*, *IsVectorField*,
Jacobian, *Laplacian*, *LineInt*, *MapToBasis*, ∇, *Norm*, *Normalize*, *PathInt*, *PlotPositionVector*,
PlotVector, *PositionVector*, *PrincipalNormal*, *RadiusOfCurvature*, *RootedVector*,
ScalarPotential, *SetCoordinateParameters*, *SetCoordinates*, *SpaceCurve*, *SurfaceInt*,
TNBFrame, *TangentLine*, *TangentPlane*, *TangentVector*, *Torsion*, *Vector*, *VectorField*,
VectorPotential, *VectorSpace*, *Wronskian*, *diff*, *eval*, *evalVF*, *int*, *limit*, *series*]

```
> A := Matrix([[0, -1], [5, 0]])
```

$$A := \begin{bmatrix} 0 & -1 \\ 5 & 0 \end{bmatrix} \quad (12)$$

```
> Determinant(A)
```

$$5 \quad (13)$$

```
> Eigenvalues(A)
```

$$\begin{bmatrix} I\sqrt{5} \\ -I\sqrt{5} \end{bmatrix} \quad (14)$$

```
> MatrixExponential(t·A)
```

$$\begin{bmatrix} \cos(\sqrt{5}\,t) & -\frac{\sin(\sqrt{5}\,t)\sqrt{5}}{5} \\ \sin(\sqrt{5}\,t)\sqrt{5} & \cos(\sqrt{5}\,t) \end{bmatrix} \quad (15)$$

```
> f1 := (x, y)→2·x + 3·y - 2·x·y
```

$$f1 := (x, y) \mapsto 2\cdot x + 3\cdot y + (-2\cdot x\cdot y) \quad (16)$$

```
> f2 := (x, y)→4·x + 6·y + x·y^2
```

$$f2 := (x, y) \mapsto 4\cdot x + 6\cdot y + x\cdot y^2 \quad (17)$$

```
> solve({f1(x, y), f2(x, y)}, {x, y})
```

$$\{x = 0, y = 0\}, \left\{x = \frac{6}{5}, y = -4\right\} \quad (18)$$

```
> Jm := Jacobian([f1(x, y), f2(x, y)], [x, y])
```

$$Jm := \begin{bmatrix} -2y + 2 & -2x + 3 \\ y^2 + 4 & 2xy + 6 \end{bmatrix} \quad (19)$$

```
> A := subs([x = 0, y = 0], Jm)
```

$$A := \begin{bmatrix} 2 & 3 \\ 4 & 6 \end{bmatrix} \quad (20)$$

```
> Eigenvalues(A)
```

$$\begin{bmatrix} 0 \\ 8 \end{bmatrix} \quad (21)$$

```
> x := 'x' : eq := x^2 - 0.5 = x
```

$$eq := x^2 - 0.5 = x \quad (22)$$

```
> solve(eq, x)
```

$$1.366025404, -0.3660254038 \quad (23)$$

```
> f := x→x^2 - 0.5
```

$$f := x \mapsto x^2 - 0.5 \quad (24)$$

```
> x := 0
```

(25)

$$x := 0 \qquad (25)$$

> **for** i **from** 1 **to** 100 **do** $x := f(x) : \mathrm{psi}(i) := x;$ **od**

$$x := -0.5$$
$$\psi(1) := -0.5$$
$$x := -0.25$$
$$\psi(2) := -0.25$$
$$x := -0.4375$$
$$\psi(3) := -0.4375$$
$$x := -0.30859375$$
$$\psi(4) := -0.30859375$$
$$x := -0.4047698975$$
$$\psi(5) := -0.4047698975$$
$$x := -0.3361613301$$
$$\psi(6) := -0.3361613301$$
$$x := -0.3869955601$$
$$\psi(7) := -0.3869955601$$
$$x := -0.3502344365$$
$$\psi(8) := -0.3502344365$$
$$x := -0.3773358395$$
$$\psi(9) := -0.3773358395$$
$$x := -0.3576176642$$
$$\psi(10) := -0.3576176642$$
$$x := -0.3721096063$$
$$\psi(11) := -0.3721096063$$
$$x := -0.3615344409$$
$$\psi(12) := -0.3615344409$$
$$x := -0.3692928480$$
$$\psi(13) := -0.3692928480$$
$$x := -0.3636227924$$
$$\psi(14) := -0.3636227924$$
$$x := -0.3677784648$$
$$\psi(15) := -0.3677784648$$
$$x := -0.3647390008$$
$$\psi(16) := -0.3647390008$$
$$x := -0.3669654613$$
$$\psi(17) := -0.3669654613$$

$$x := -0.3653363502$$
$$\psi(18) := -0.3653363502$$
$$x := -0.3665293512$$
$$\psi(19) := -0.3665293512$$
$$x := -0.3656562347$$
$$\psi(20) := -0.3656562347$$
$$x := -0.3662955180$$
$$\psi(21) := -0.3662955180$$
$$x := -0.3658275935$$
$$\psi(22) := -0.3658275935$$
$$x := -0.3661701718$$
$$\psi(23) := -0.3661701718$$
$$x := -0.3659194053$$
$$\psi(24) := -0.3659194053$$
$$x := -0.3661029888$$
$$\psi(25) := -0.3661029888$$
$$x := -0.3659686016$$
$$\psi(26) := -0.3659686016$$
$$x := -0.3660669826$$
$$\psi(27) := -0.3660669826$$
$$x := -0.3659949642$$
$$\psi(28) := -0.3659949642$$
$$x := -0.3660476862$$
$$\psi(29) := -0.3660476862$$
$$x := -0.3660090914$$
$$\psi(30) := -0.3660090914$$
$$x := -0.3660373450$$
$$\psi(31) := -0.3660373450$$
$$x := -0.3660166621$$
$$\psi(32) := -0.3660166621$$
$$x := -0.3660318031$$
$$\psi(33) := -0.3660318031$$
$$x := -0.3660207191$$
$$\psi(34) := -0.3660207191$$
$$x := -0.3660288332$$
$$\psi(35) := -0.3660288332$$

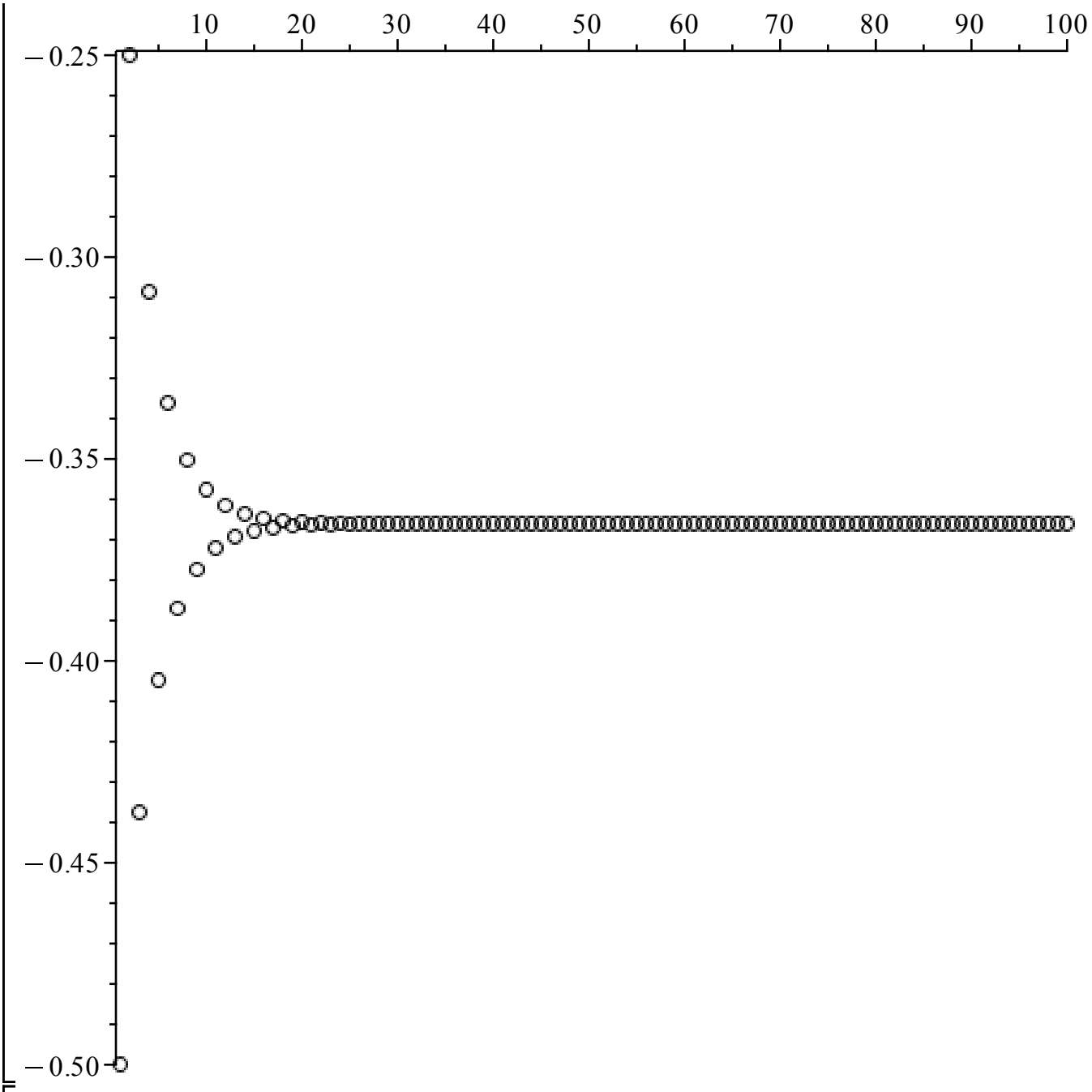
$$x := -0.3660228933$$
$$\psi(36) := -0.3660228933$$
$$x := -0.3660272416$$
$$\psi(37) := -0.3660272416$$
$$x := -0.3660240584$$
$$\psi(38) := -0.3660240584$$
$$x := -0.3660263887$$
$$\psi(39) := -0.3660263887$$
$$x := -0.3660246828$$
$$\psi(40) := -0.3660246828$$
$$x := -0.3660259316$$
$$\psi(41) := -0.3660259316$$
$$x := -0.3660250174$$
$$\psi(42) := -0.3660250174$$
$$x := -0.3660256866$$
$$\psi(43) := -0.3660256866$$
$$x := -0.3660251967$$
$$\psi(44) := -0.3660251967$$
$$x := -0.3660255554$$
$$\psi(45) := -0.3660255554$$
$$x := -0.3660252928$$
$$\psi(46) := -0.3660252928$$
$$x := -0.3660254850$$
$$\psi(47) := -0.3660254850$$
$$x := -0.3660253443$$
$$\psi(48) := -0.3660253443$$
$$x := -0.3660254473$$
$$\psi(49) := -0.3660254473$$
$$x := -0.3660253719$$
$$\psi(50) := -0.3660253719$$
$$x := -0.3660254271$$
$$\psi(51) := -0.3660254271$$
$$x := -0.3660253867$$
$$\psi(52) := -0.3660253867$$
$$x := -0.3660254163$$
$$\psi(53) := -0.3660254163$$

$$x := -0.3660253946$$
$$\psi(54) := -0.3660253946$$
$$x := -0.3660254105$$
$$\psi(55) := -0.3660254105$$
$$x := -0.3660253989$$
$$\psi(56) := -0.3660253989$$
$$x := -0.3660254074$$
$$\psi(57) := -0.3660254074$$
$$x := -0.3660254011$$
$$\psi(58) := -0.3660254011$$
$$x := -0.3660254058$$
$$\psi(59) := -0.3660254058$$
$$x := -0.3660254023$$
$$\psi(60) := -0.3660254023$$
$$x := -0.3660254049$$
$$\psi(61) := -0.3660254049$$
$$x := -0.3660254030$$
$$\psi(62) := -0.3660254030$$
$$x := -0.3660254044$$
$$\psi(63) := -0.3660254044$$
$$x := -0.3660254033$$
$$\psi(64) := -0.3660254033$$
$$x := -0.3660254041$$
$$\psi(65) := -0.3660254041$$
$$x := -0.3660254036$$
$$\psi(66) := -0.3660254036$$
$$x := -0.3660254039$$
$$\psi(67) := -0.3660254039$$
$$x := -0.3660254037$$
$$\psi(68) := -0.3660254037$$
$$x := -0.3660254038$$
$$\psi(69) := -0.3660254038$$
$$x := -0.3660254038$$
$$\psi(70) := -0.3660254038$$
$$x := -0.3660254038$$
$$\psi(71) := -0.3660254038$$

$$x := -0.3660254038$$
$$\psi(72) := -0.3660254038$$
$$x := -0.3660254038$$
$$\psi(73) := -0.3660254038$$
$$x := -0.3660254038$$
$$\psi(74) := -0.3660254038$$
$$x := -0.3660254038$$
$$\psi(75) := -0.3660254038$$
$$x := -0.3660254038$$
$$\psi(76) := -0.3660254038$$
$$x := -0.3660254038$$
$$\psi(77) := -0.3660254038$$
$$x := -0.3660254038$$
$$\psi(78) := -0.3660254038$$
$$x := -0.3660254038$$
$$\psi(79) := -0.3660254038$$
$$x := -0.3660254038$$
$$\psi(80) := -0.3660254038$$
$$x := -0.3660254038$$
$$\psi(81) := -0.3660254038$$
$$x := -0.3660254038$$
$$\psi(82) := -0.3660254038$$
$$x := -0.3660254038$$
$$\psi(83) := -0.3660254038$$
$$x := -0.3660254038$$
$$\psi(84) := -0.3660254038$$
$$x := -0.3660254038$$
$$\psi(85) := -0.3660254038$$
$$x := -0.3660254038$$
$$\psi(86) := -0.3660254038$$
$$x := -0.3660254038$$
$$\psi(87) := -0.3660254038$$
$$x := -0.3660254038$$
$$\psi(88) := -0.3660254038$$
$$x := -0.3660254038$$
$$\psi(89) := -0.3660254038$$

$$x := -0.3660254038$$
$$\psi(90) := -0.3660254038$$
$$x := -0.3660254038$$
$$\psi(91) := -0.3660254038$$
$$x := -0.3660254038$$
$$\psi(92) := -0.3660254038$$
$$x := -0.3660254038$$
$$\psi(93) := -0.3660254038$$
$$x := -0.3660254038$$
$$\psi(94) := -0.3660254038$$
$$x := -0.3660254038$$
$$\psi(95) := -0.3660254038$$
$$x := -0.3660254038$$
$$\psi(96) := -0.3660254038$$
$$x := -0.3660254038$$
$$\psi(97) := -0.3660254038$$
$$x := -0.3660254038$$
$$\psi(98) := -0.3660254038$$
$$x := -0.3660254038$$
$$\psi(99) := -0.3660254038$$
$$x := -0.3660254038$$
$$\psi(100) := -0.3660254038 \quad \textbf{(26)}$$

```
> points := [[n, psi(n)]$n = 1..100]: with(plots): pointplot(points, symbol = circle)
```



> $x := 1.2$

$$x := 1.2 \qquad \textbf{(27)}$$

> **for** i **from** 1 **to** 100 **do** $x := f(x)$: psi(i) $:= x$; **od**

$$x := 0.94$$

$$\psi(1) := 0.94$$

$$x := 0.3836$$

$$\psi(2) := 0.3836$$

$$x := -0.35285104$$

$$\psi(3) := -0.35285104$$

$$x := -0.3754961436$$

$$\psi(4) := -0.3754961436$$
$$x := -0.3590026461$$
$$\psi(5) := -0.3590026461$$
$$x := -0.3711171001$$
$$\psi(6) := -0.3711171001$$
$$x := -0.3622720980$$
$$\psi(7) := -0.3622720980$$
$$x := -0.3687589270$$
$$\psi(8) := -0.3687589270$$
$$x := -0.3640168538$$
$$\psi(9) := -0.3640168538$$
$$x := -0.3674917302$$
$$\psi(10) := -0.3674917302$$
$$x := -0.3649498282$$
$$\psi(11) := -0.3649498282$$
$$x := -0.3668116229$$
$$\psi(12) := -0.3668116229$$
$$x := -0.3654492333$$
$$\psi(13) := -0.3654492333$$
$$x := -0.3664468579$$
$$\psi(14) := -0.3664468579$$
$$x := -0.3657167003$$
$$\psi(15) := -0.3657167003$$
$$x := -0.3662512951$$
$$\psi(16) := -0.3662512951$$
$$x := -0.3658599888$$
$$\psi(17) := -0.3658599888$$
$$x := -0.3661464686$$
$$\psi(18) := -0.3661464686$$
$$x := -0.3659367635$$
$$\psi(19) := -0.3659367635$$
$$x := -0.3660902851$$
$$\psi(20) := -0.3660902851$$
$$x := -0.3659779032$$
$$\psi(21) := -0.3659779032$$
$$x := -0.3660601744$$

$$\psi(22) := -0.3660601744$$
$$x := -0.3659999487$$
$$\psi(23) := -0.3659999487$$
$$x := -0.3660440376$$
$$\psi(24) := -0.3660440376$$
$$x := -0.3660117625$$
$$\psi(25) := -0.3660117625$$
$$x := -0.3660353897$$
$$\psi(26) := -0.3660353897$$
$$x := -0.3660180935$$
$$\psi(27) := -0.3660180935$$
$$x := -0.3660307552$$
$$\psi(28) := -0.3660307552$$
$$x := -0.3660214862$$
$$\psi(29) := -0.3660214862$$
$$x := -0.3660282716$$
$$\psi(30) := -0.3660282716$$
$$x := -0.3660233044$$
$$\psi(31) := -0.3660233044$$
$$x := -0.3660269406$$
$$\psi(32) := -0.3660269406$$
$$x := -0.3660242788$$
$$\psi(33) := -0.3660242788$$
$$x := -0.3660262273$$
$$\psi(34) := -0.3660262273$$
$$x := -0.3660248009$$
$$\psi(35) := -0.3660248009$$
$$x := -0.3660258451$$
$$\psi(36) := -0.3660258451$$
$$x := -0.3660250807$$
$$\psi(37) := -0.3660250807$$
$$x := -0.3660256403$$
$$\psi(38) := -0.3660256403$$
$$x := -0.3660252306$$
$$\psi(39) := -0.3660252306$$
$$x := -0.3660255306$$

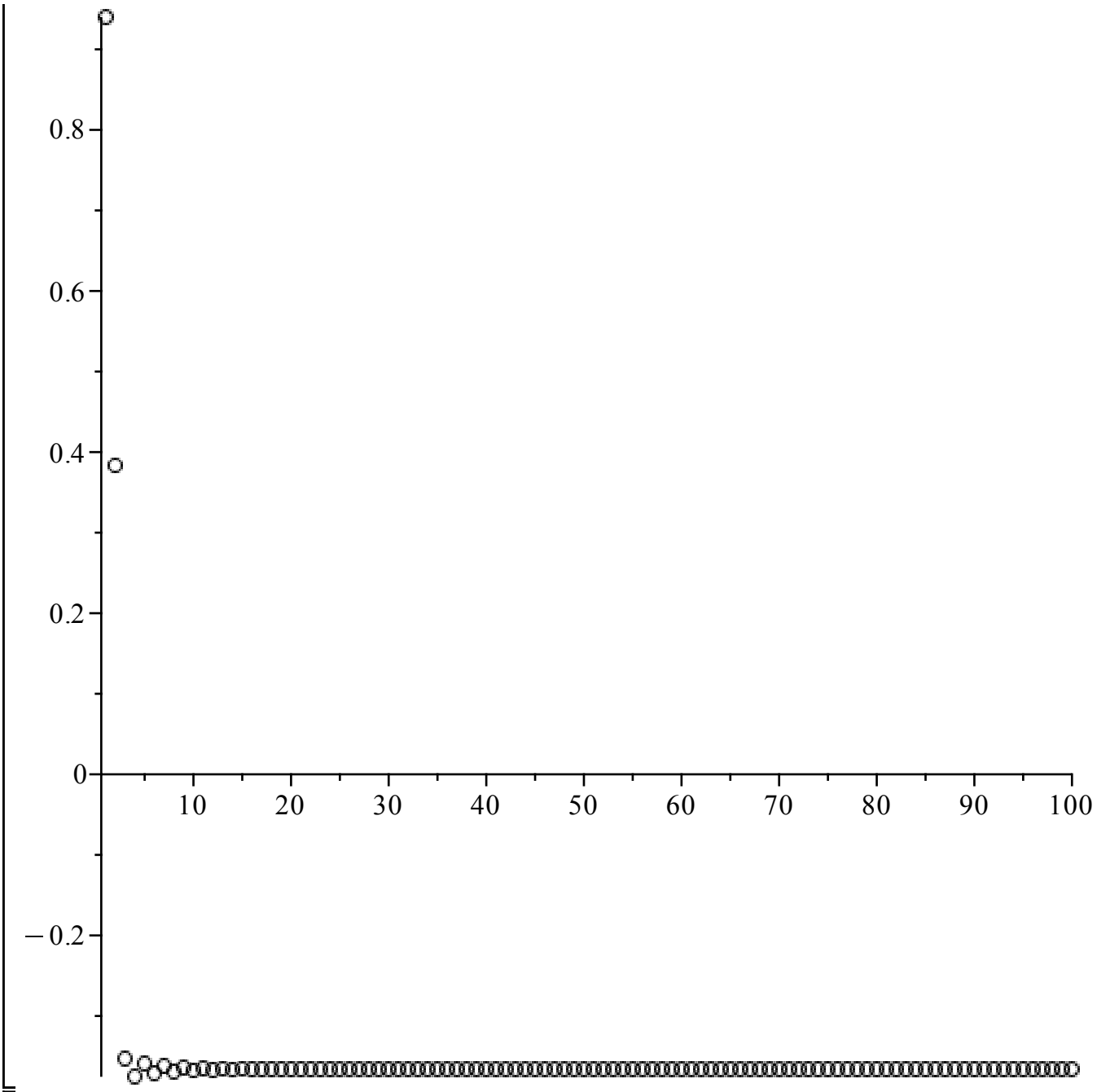
$$\psi(40) := -0.3660255306$$
$$x := -0.3660253109$$
$$\psi(41) := -0.3660253109$$
$$x := -0.3660254718$$
$$\psi(42) := -0.3660254718$$
$$x := -0.3660253540$$
$$\psi(43) := -0.3660253540$$
$$x := -0.3660254402$$
$$\psi(44) := -0.3660254402$$
$$x := -0.3660253771$$
$$\psi(45) := -0.3660253771$$
$$x := -0.3660254233$$
$$\psi(46) := -0.3660254233$$
$$x := -0.3660253895$$
$$\psi(47) := -0.3660253895$$
$$x := -0.3660254142$$
$$\psi(48) := -0.3660254142$$
$$x := -0.3660253962$$
$$\psi(49) := -0.3660253962$$
$$x := -0.3660254093$$
$$\psi(50) := -0.3660254093$$
$$x := -0.3660253997$$
$$\psi(51) := -0.3660253997$$
$$x := -0.3660254068$$
$$\psi(52) := -0.3660254068$$
$$x := -0.3660254016$$
$$\psi(53) := -0.3660254016$$
$$x := -0.3660254054$$
$$\psi(54) := -0.3660254054$$
$$x := -0.3660254026$$
$$\psi(55) := -0.3660254026$$
$$x := -0.3660254047$$
$$\psi(56) := -0.3660254047$$
$$x := -0.3660254031$$
$$\psi(57) := -0.3660254031$$
$$x := -0.3660254043$$

$$\psi(58) := -0.3660254043$$
$$x := -0.3660254034$$
$$\psi(59) := -0.3660254034$$
$$x := -0.3660254041$$
$$\psi(60) := -0.3660254041$$
$$x := -0.3660254036$$
$$\psi(61) := -0.3660254036$$
$$x := -0.3660254039$$
$$\psi(62) := -0.3660254039$$
$$x := -0.3660254037$$
$$\psi(63) := -0.3660254037$$
$$x := -0.3660254038$$
$$\psi(64) := -0.3660254038$$
$$x := -0.3660254038$$
$$\psi(65) := -0.3660254038$$
$$x := -0.3660254038$$
$$\psi(66) := -0.3660254038$$
$$x := -0.3660254038$$
$$\psi(67) := -0.3660254038$$
$$x := -0.3660254038$$
$$\psi(68) := -0.3660254038$$
$$x := -0.3660254038$$
$$\psi(69) := -0.3660254038$$
$$x := -0.3660254038$$
$$\psi(70) := -0.3660254038$$
$$x := -0.3660254038$$
$$\psi(71) := -0.3660254038$$
$$x := -0.3660254038$$
$$\psi(72) := -0.3660254038$$
$$x := -0.3660254038$$
$$\psi(73) := -0.3660254038$$
$$x := -0.3660254038$$
$$\psi(74) := -0.3660254038$$
$$x := -0.3660254038$$
$$\psi(75) := -0.3660254038$$
$$x := -0.3660254038$$

$$\psi(76) := -0.3660254038$$
$$x := -0.3660254038$$
$$\psi(77) := -0.3660254038$$
$$x := -0.3660254038$$
$$\psi(78) := -0.3660254038$$
$$x := -0.3660254038$$
$$\psi(79) := -0.3660254038$$
$$x := -0.3660254038$$
$$\psi(80) := -0.3660254038$$
$$x := -0.3660254038$$
$$\psi(81) := -0.3660254038$$
$$x := -0.3660254038$$
$$\psi(82) := -0.3660254038$$
$$x := -0.3660254038$$
$$\psi(83) := -0.3660254038$$
$$x := -0.3660254038$$
$$\psi(84) := -0.3660254038$$
$$x := -0.3660254038$$
$$\psi(85) := -0.3660254038$$
$$x := -0.3660254038$$
$$\psi(86) := -0.3660254038$$
$$x := -0.3660254038$$
$$\psi(87) := -0.3660254038$$
$$x := -0.3660254038$$
$$\psi(88) := -0.3660254038$$
$$x := -0.3660254038$$
$$\psi(89) := -0.3660254038$$
$$x := -0.3660254038$$
$$\psi(90) := -0.3660254038$$
$$x := -0.3660254038$$
$$\psi(91) := -0.3660254038$$
$$x := -0.3660254038$$
$$\psi(92) := -0.3660254038$$
$$x := -0.3660254038$$
$$\psi(93) := -0.3660254038$$
$$x := -0.3660254038$$

$$\psi(94) := -0.3660254038$$
$$x := -0.3660254038$$
$$\psi(95) := -0.3660254038$$
$$x := -0.3660254038$$
$$\psi(96) := -0.3660254038$$
$$x := -0.3660254038$$
$$\psi(97) := -0.3660254038$$
$$x := -0.3660254038$$
$$\psi(98) := -0.3660254038$$
$$x := -0.3660254038$$
$$\psi(99) := -0.3660254038$$
$$x := -0.3660254038$$
$$\psi(100) := -0.3660254038 \quad \textbf{(28)}$$

```
> points := [[n, psi(n)]$n = 1..100]: with(plots): pointplot(points, symbol = circle)
```




```
> x := -1.1
```

$$x := -1.1 \tag{29}$$

```
> for i from 1 to 100 do x := f(x) : psi(i) := x; od
```

$$x := 0.71$$

$$\psi(1) := 0.71$$

$$x := 0.0041$$

$$\psi(2) := 0.0041$$

$$x := -0.49998319$$

$$\psi(3) := -0.49998319$$

$$x := -0.2500168097$$

$$\psi(4) := -0.2500168097$$
$$x := -0.4374915949$$
$$\psi(5) := -0.4374915949$$
$$x := -0.3086011044$$
$$\psi(6) := -0.3086011044$$
$$x := -0.4047653584$$
$$\psi(7) := -0.4047653584$$
$$x := -0.3361650046$$
$$\psi(8) := -0.3361650046$$
$$x := -0.3869930897$$
$$\psi(9) := -0.3869930897$$
$$x := -0.3502363485$$
$$\psi(10) := -0.3502363485$$
$$x := -0.3773345002$$
$$\psi(11) := -0.3773345002$$
$$x := -0.3576186750$$
$$\psi(12) := -0.3576186750$$
$$x := -0.3721088833$$
$$\psi(13) := -0.3721088833$$
$$x := -0.3615349790$$
$$\psi(14) := -0.3615349790$$
$$x := -0.3692924590$$
$$\psi(15) := -0.3692924590$$
$$x := -0.3636230797$$
$$\psi(16) := -0.3636230797$$
$$x := -0.3677782559$$
$$\psi(17) := -0.3677782559$$
$$x := -0.3647391545$$
$$\psi(18) := -0.3647391545$$
$$x := -0.3669653492$$
$$\psi(19) := -0.3669653492$$
$$x := -0.3653364325$$
$$\psi(20) := -0.3653364325$$
$$x := -0.3665292911$$
$$\psi(21) := -0.3665292911$$
$$x := -0.3656562788$$

$$\psi(22) := -0.3656562788$$
$$x := -0.3662954858$$
$$\psi(23) := -0.3662954858$$
$$x := -0.3658276171$$
$$\psi(24) := -0.3658276171$$
$$x := -0.3661701546$$
$$\psi(25) := -0.3661701546$$
$$x := -0.3659194179$$
$$\psi(26) := -0.3659194179$$
$$x := -0.3661029796$$
$$\psi(27) := -0.3661029796$$
$$x := -0.3659686083$$
$$\psi(28) := -0.3659686083$$
$$x := -0.3660669777$$
$$\psi(29) := -0.3660669777$$
$$x := -0.3659949678$$
$$\psi(30) := -0.3659949678$$
$$x := -0.3660476835$$
$$\psi(31) := -0.3660476835$$
$$x := -0.3660090934$$
$$\psi(32) := -0.3660090934$$
$$x := -0.3660373435$$
$$\psi(33) := -0.3660373435$$
$$x := -0.3660166632$$
$$\psi(34) := -0.3660166632$$
$$x := -0.3660318023$$
$$\psi(35) := -0.3660318023$$
$$x := -0.3660207197$$
$$\psi(36) := -0.3660207197$$
$$x := -0.3660288328$$
$$\psi(37) := -0.3660288328$$
$$x := -0.3660228936$$
$$\psi(38) := -0.3660228936$$
$$x := -0.3660272414$$
$$\psi(39) := -0.3660272414$$
$$x := -0.3660240586$$

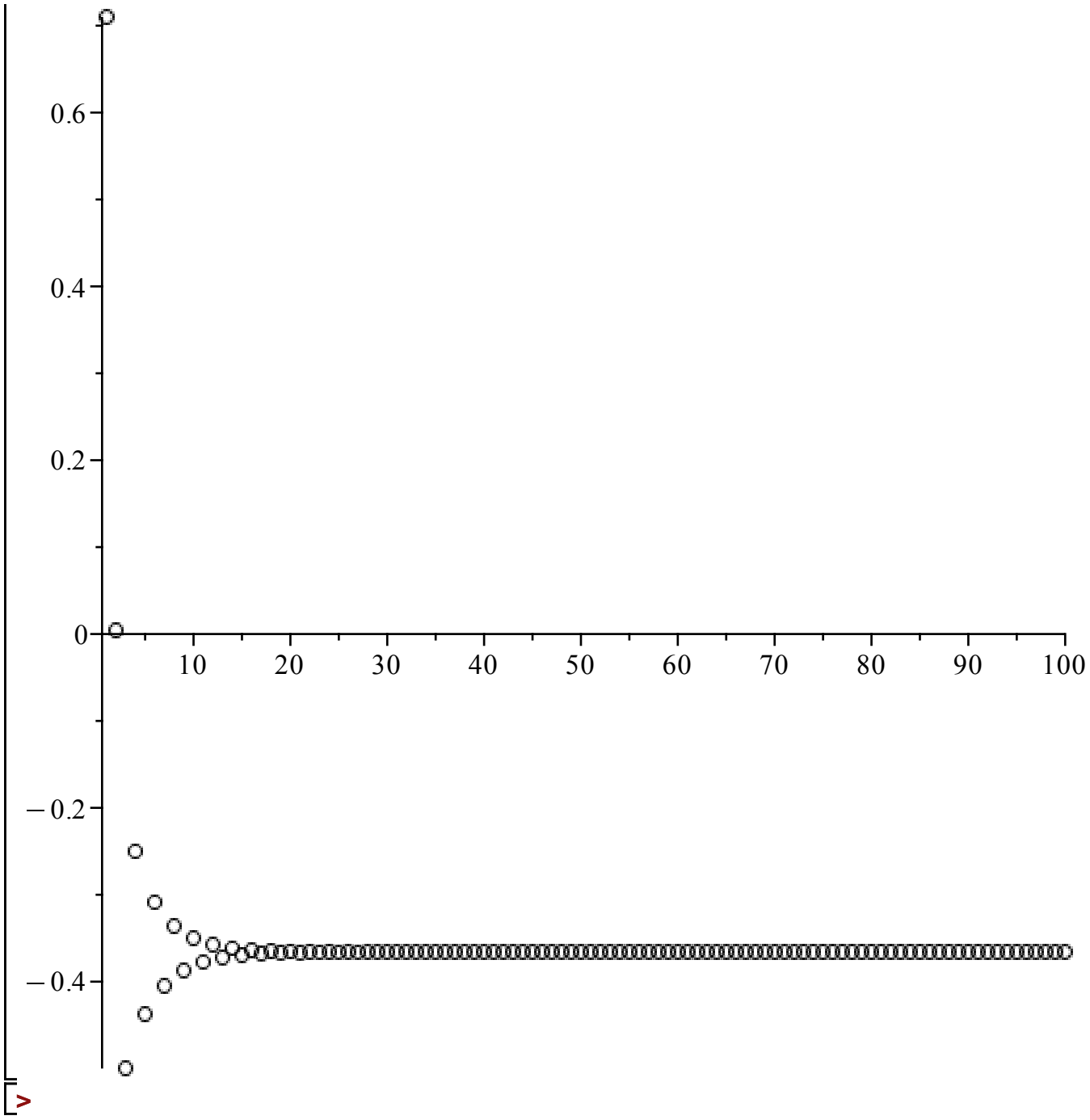
$$\psi(40) := -0.3660240586$$
$$x := -0.3660263885$$
$$\psi(41) := -0.3660263885$$
$$x := -0.3660246829$$
$$\psi(42) := -0.3660246829$$
$$x := -0.3660259315$$
$$\psi(43) := -0.3660259315$$
$$x := -0.3660250175$$
$$\psi(44) := -0.3660250175$$
$$x := -0.3660256866$$
$$\psi(45) := -0.3660256866$$
$$x := -0.3660251967$$
$$\psi(46) := -0.3660251967$$
$$x := -0.3660255554$$
$$\psi(47) := -0.3660255554$$
$$x := -0.3660252928$$
$$\psi(48) := -0.3660252928$$
$$x := -0.3660254850$$
$$\psi(49) := -0.3660254850$$
$$x := -0.3660253443$$
$$\psi(50) := -0.3660253443$$
$$x := -0.3660254473$$
$$\psi(51) := -0.3660254473$$
$$x := -0.3660253719$$
$$\psi(52) := -0.3660253719$$
$$x := -0.3660254271$$
$$\psi(53) := -0.3660254271$$
$$x := -0.3660253867$$
$$\psi(54) := -0.3660253867$$
$$x := -0.3660254163$$
$$\psi(55) := -0.3660254163$$
$$x := -0.3660253946$$
$$\psi(56) := -0.3660253946$$
$$x := -0.3660254105$$
$$\psi(57) := -0.3660254105$$
$$x := -0.3660253989$$

$$\psi(58) := -0.3660253989$$
$$x := -0.3660254074$$
$$\psi(59) := -0.3660254074$$
$$x := -0.3660254011$$
$$\psi(60) := -0.3660254011$$
$$x := -0.3660254058$$
$$\psi(61) := -0.3660254058$$
$$x := -0.3660254023$$
$$\psi(62) := -0.3660254023$$
$$x := -0.3660254049$$
$$\psi(63) := -0.3660254049$$
$$x := -0.3660254030$$
$$\psi(64) := -0.3660254030$$
$$x := -0.3660254044$$
$$\psi(65) := -0.3660254044$$
$$x := -0.3660254033$$
$$\psi(66) := -0.3660254033$$
$$x := -0.3660254041$$
$$\psi(67) := -0.3660254041$$
$$x := -0.3660254036$$
$$\psi(68) := -0.3660254036$$
$$x := -0.3660254039$$
$$\psi(69) := -0.3660254039$$
$$x := -0.3660254037$$
$$\psi(70) := -0.3660254037$$
$$x := -0.3660254038$$
$$\psi(71) := -0.3660254038$$
$$x := -0.3660254038$$
$$\psi(72) := -0.3660254038$$
$$x := -0.3660254038$$
$$\psi(73) := -0.3660254038$$
$$x := -0.3660254038$$
$$\psi(74) := -0.3660254038$$
$$x := -0.3660254038$$
$$\psi(75) := -0.3660254038$$
$$x := -0.3660254038$$

$$\psi(76) := -0.3660254038$$
$$x := -0.3660254038$$
$$\psi(77) := -0.3660254038$$
$$x := -0.3660254038$$
$$\psi(78) := -0.3660254038$$
$$x := -0.3660254038$$
$$\psi(79) := -0.3660254038$$
$$x := -0.3660254038$$
$$\psi(80) := -0.3660254038$$
$$x := -0.3660254038$$
$$\psi(81) := -0.3660254038$$
$$x := -0.3660254038$$
$$\psi(82) := -0.3660254038$$
$$x := -0.3660254038$$
$$\psi(83) := -0.3660254038$$
$$x := -0.3660254038$$
$$\psi(84) := -0.3660254038$$
$$x := -0.3660254038$$
$$\psi(85) := -0.3660254038$$
$$x := -0.3660254038$$
$$\psi(86) := -0.3660254038$$
$$x := -0.3660254038$$
$$\psi(87) := -0.3660254038$$
$$x := -0.3660254038$$
$$\psi(88) := -0.3660254038$$
$$x := -0.3660254038$$
$$\psi(89) := -0.3660254038$$
$$x := -0.3660254038$$
$$\psi(90) := -0.3660254038$$
$$x := -0.3660254038$$
$$\psi(91) := -0.3660254038$$
$$x := -0.3660254038$$
$$\psi(92) := -0.3660254038$$
$$x := -0.3660254038$$
$$\psi(93) := -0.3660254038$$
$$x := -0.3660254038$$

$$\psi(94) := -0.3660254038$$
$$x := -0.3660254038$$
$$\psi(95) := -0.3660254038$$
$$x := -0.3660254038$$
$$\psi(96) := -0.3660254038$$
$$x := -0.3660254038$$
$$\psi(97) := -0.3660254038$$
$$x := -0.3660254038$$
$$\psi(98) := -0.3660254038$$
$$x := -0.3660254038$$
$$\psi(99) := -0.3660254038$$
$$x := -0.3660254038$$
$$\psi(100) := -0.3660254038 \quad \textbf{(30)}$$

> $points := [[n, \mathrm{psi}(n)]\$n = 1..100] : with(plots) : pointplot(points, symbol = circle)$


0.6
0.4
0.2
0
10
20
30
40
50
60
70
80
90
100
−0.2
−0.4
v