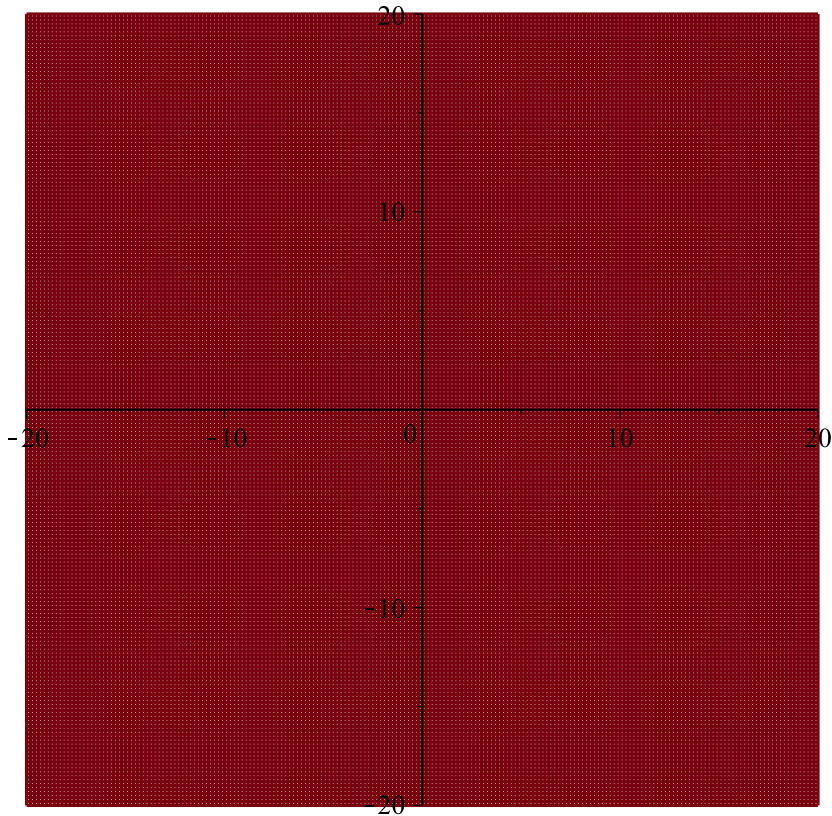


```
> restart;
> l:= [seq(t+I*n, n=-100..100), seq(I*t+n, n=-100..100)]/5:
> l[3];
```

$$\frac{1}{5} t - \frac{98}{5} I$$

(1)

```
> with(plots):
> p:= [seq(plot([Re(l[n]), Im(l[n]), t=-100..100]), n=1..nops(l))]:
> display(p, scaling=constrained);
```

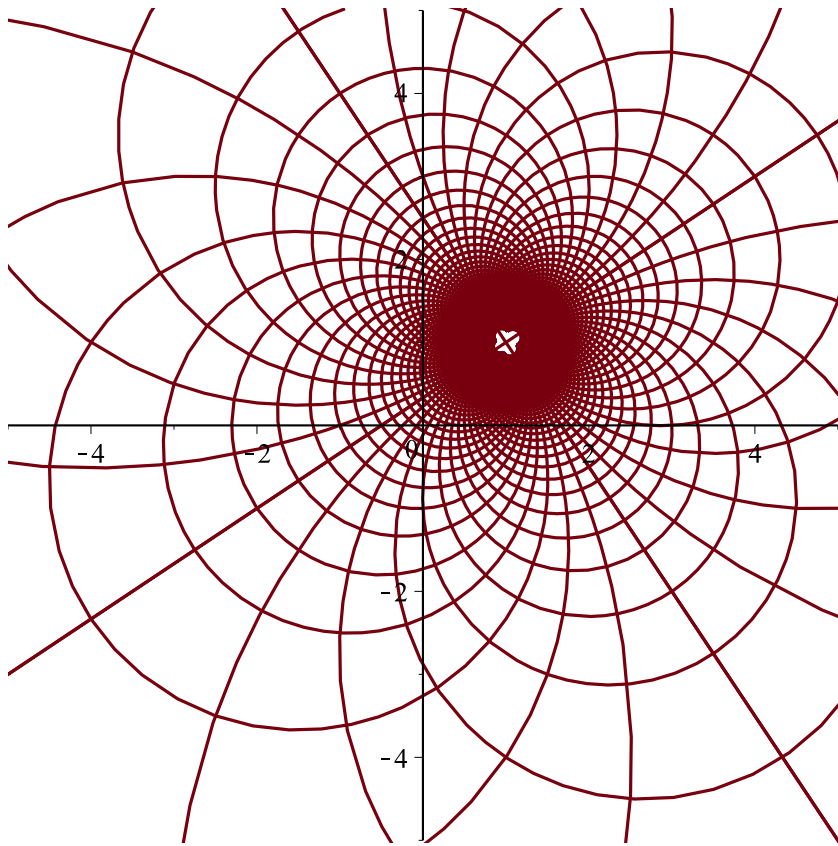


```
> f:=z->((I+1)*z+1)/(z-2);
```

$$f:=z \rightarrow \frac{(1+I)z+1}{z-2}$$

(2)

```
> p:= [seq(plot([Re(f(l[n])), Im(f(l[n])), t=-100..100]), n=1..nops(l))]:
> display(p, scaling=constrained, view=[-5..5, -5..5]);
```

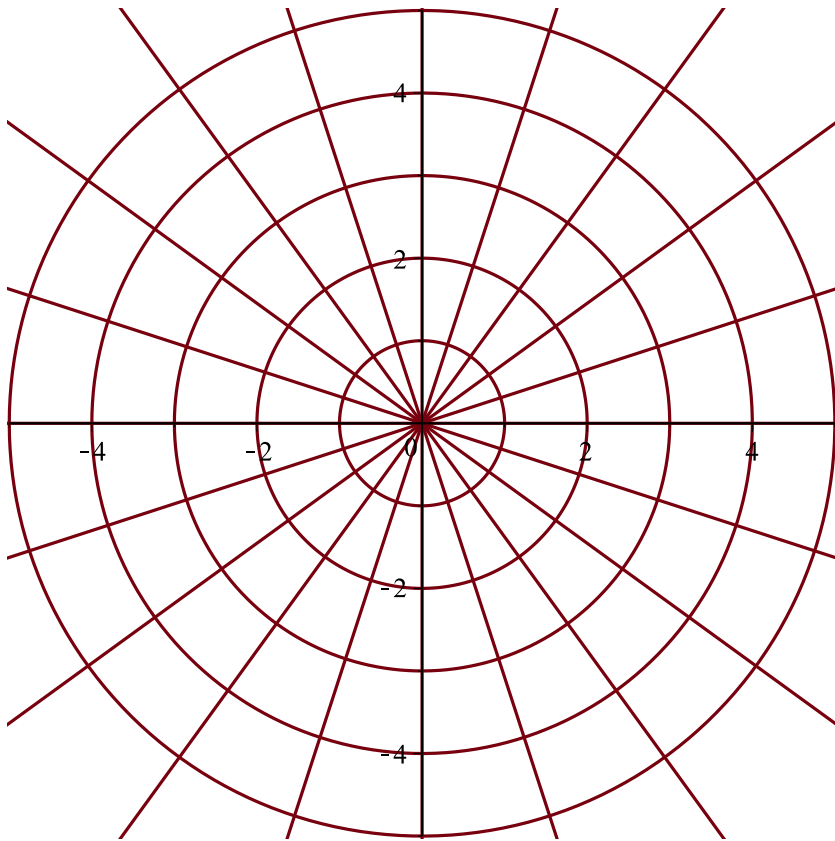


```
> c:=seq(n*exp(I*t),n=1..5),seq((t+Pi)*5*10*exp(I*2*Pi*n/20),n=1..20);
```

$$c := e^{It}, 2e^{It}, 3e^{It}, 4e^{It}, 5e^{It}, 50(t+\pi)e^{\frac{1}{10}I\pi}, 50(t+\pi)e^{\frac{1}{5}I\pi}, 50(t+\pi)e^{\frac{3}{10}I\pi}, 50(t+\pi)e^{\frac{2}{5}I\pi}, 50I(t+\pi), 50(t+\pi)e^{\frac{3}{5}I\pi}, 50(t+\pi)e^{\frac{7}{10}I\pi}, 50(t+\pi)e^{\frac{4}{5}I\pi}, 50(t+\pi)e^{\frac{9}{10}I\pi}, -50t-50\pi, 50(t+\pi)e^{-\frac{9}{10}I\pi}, 50(t+\pi)e^{-\frac{4}{5}I\pi}, 50(t+\pi)e^{-\frac{7}{10}I\pi}, 50(t+\pi)e^{-\frac{3}{5}I\pi}, -50I(t+\pi), 50(t+\pi)e^{-\frac{2}{5}I\pi}, 50(t+\pi)e^{-\frac{3}{10}I\pi}, 50(t+\pi)e^{-\frac{1}{5}I\pi}, 50(t+\pi)e^{-\frac{1}{10}I\pi}, 50t+50\pi$$

(3)

```
> p:=[seq(plot([Re(c[n]),Im(c[n])],t=-Pi..Pi),n=1..25)]:
display(p,scaling=constrained,view=[-5..5,-5..5]);
```



```
> p:=seq(plot([Re(f(c[n])),Im(f(c[n]))],t=-Pi..Pi),color=red),n=1.  
.5):  
r:=seq(plot([Re(f(c[n])),Im(f(c[n]))],t=-Pi..Pi),color=green),n=6.  
.25):  
display([p,r],scaling=constrained,view=[-5..5,-5..5]);
```

