

Needham, VDGf, Graphics exercises, pp. 199-200.

G. Palmer, August 18, 2023

Plot z^2 and z^3 vectors on a circle. Compare [19.3].

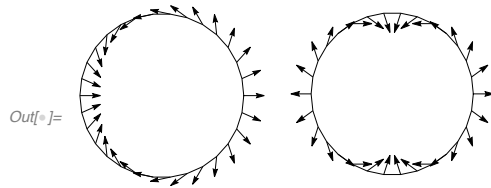


Figure 1. z^2 Figure 2. z^3

Plot z^3 vectors on a grid.

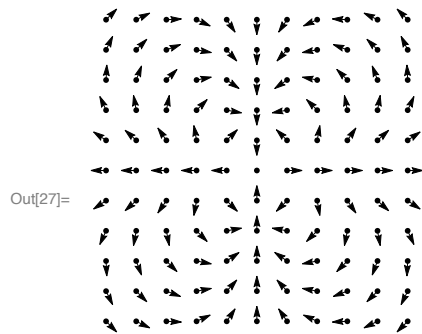
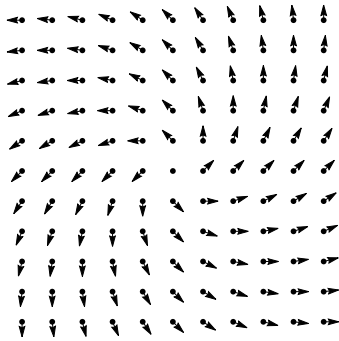
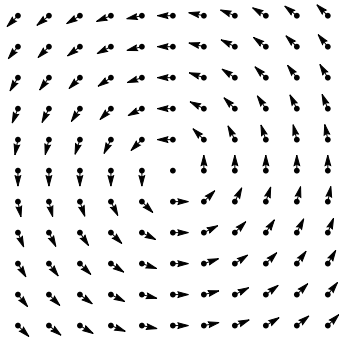


Figure 3. z^3 plotted on grid

Compare [19.4], [d], [e], [f].

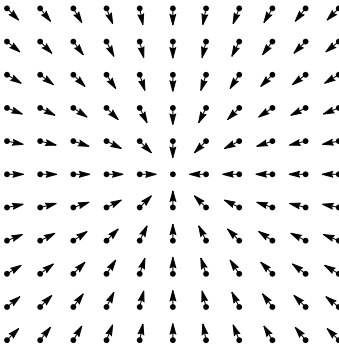


[d] Vortex
 $I(e^{i\pi/4}z)=+1$



Out[5]=

[e] Centre
 $I(e^{i\pi/2}z)=+1$



[f] Sink
 $I(e^{i\pi}z)=+1$

Plot $\bar{P}_m(z)$ on grid. Then plot $\bar{P}_{-m}(z)$ on grid and compare to $P_m(z)$ in Figure 3.

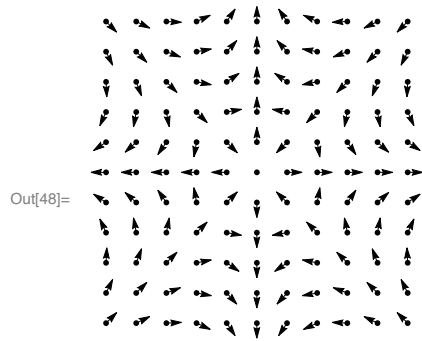


Figure 4. $\bar{z}^3$ plotted on grid

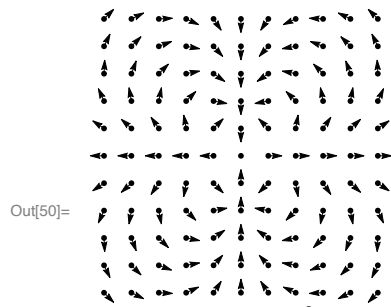


Figure 5. $\bar{z}^{(-3)}$
plotted on grid
same as Figure 3