

Exercise 17

Match the vector fields \mathbf{F} on \mathbb{R}^3 with the plots labeled I-IV. Give reasons for your choices.

$$\mathbf{F}(x, y, z) = x\mathbf{i} + y\mathbf{j} + 3\mathbf{k}$$

Solution

This vector field corresponds with plot III. The vectors do not vary with z but do vary with distance from the origin.

