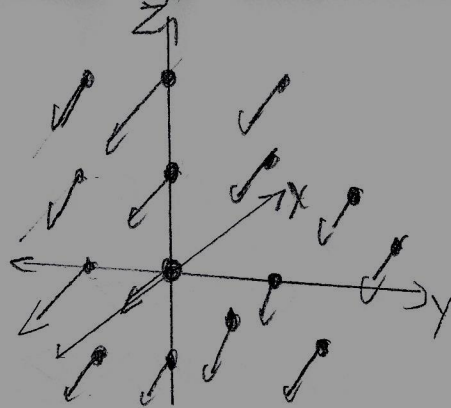


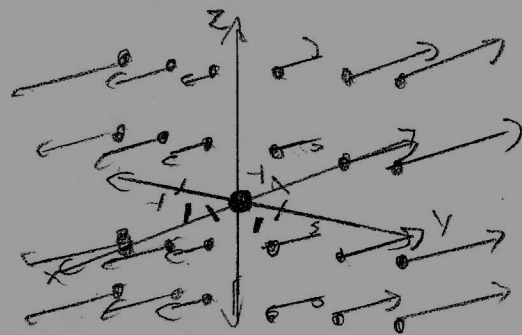
⑦ $F(x,y,z) = \mathbf{i} = \langle 1, 0, 0 \rangle$

Since $F(x,y,z) = \langle 1, 0, 0 \rangle$
therefore all points (x,y,z) have
the vector $\langle 1, 0, 0 \rangle$ perpendicular to
yz plane.



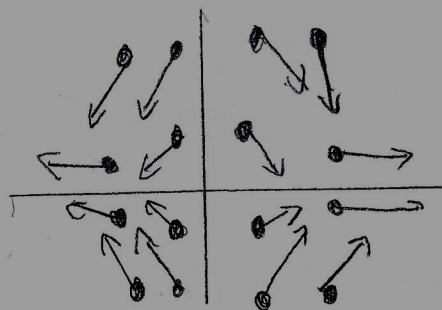
⑧ $F(x,y,z) = -y\mathbf{i} = \langle -y, 0, 0 \rangle$

As $y \rightarrow \infty$ the vectors will approach
length of ∞ in magnitude. As $y \rightarrow -\infty$
The vectors approach length of ∞ in magnitude.



⑨ $F(x,y) = \langle x, -y \rangle$

$$\begin{aligned} F(1,1) &= \langle 1, -1 \rangle & F(1,-1) &= \langle 1, 1 \rangle \\ F(-1,-1) &= \langle -1, 1 \rangle & F(-1,1) &= \langle -1, -1 \rangle \\ F(2,2) &= \langle 2, -2 \rangle & F(2,-2) &= \langle 2, 2 \rangle \\ F(-2,-2) &= \langle -2, 2 \rangle & F(-2,2) &= \langle -2, -2 \rangle \\ F(-2,-1) &= \langle -2, 1 \rangle & F(1,2) &= \langle 1, -2 \rangle \end{aligned}$$



Graph IV shares the most symmetry as $\langle x, -y \rangle$
given the directions and magnitudes of its vector
fields.