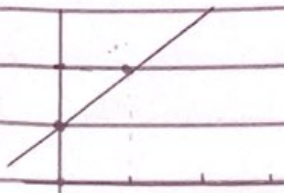


7.1

3) $F(t) = (t, t+1)$

$F(0) = (0, 1)$

$F(1) = (1, 2)$

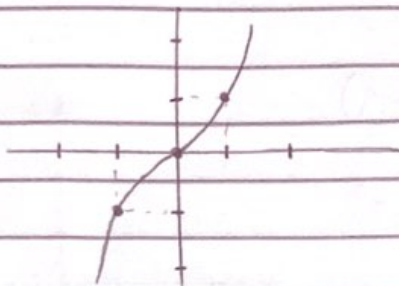


4) $F(t) = (t, t^3)$

$F(0) = (0, 0)$

$F(1) = (1, 1)$

$F(-1) = (-1, -1)$

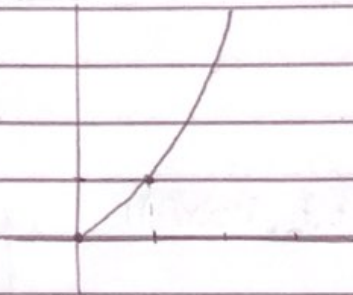


6) $F(t) = (t^2, t^4)$

$F(0) = (0, 0)$

$F(1) = (1, 1)$

$F(2) = (4, 16)$

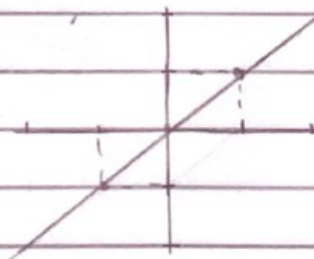


7) $F(t) = (\sin t, \sin t)$

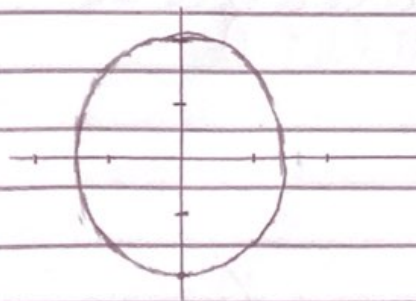
$F(\frac{\pi}{2}) = (1, 1)$

$F(-\frac{\pi}{2}) = (-1, -1)$

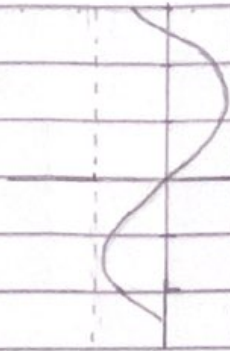
$F(0) = (0, 0)$



10) $F(t) = (\sqrt{2} \cdot \cos t, 2 \cdot \sin t)$



19) $F(t) = (\sin t, t)$

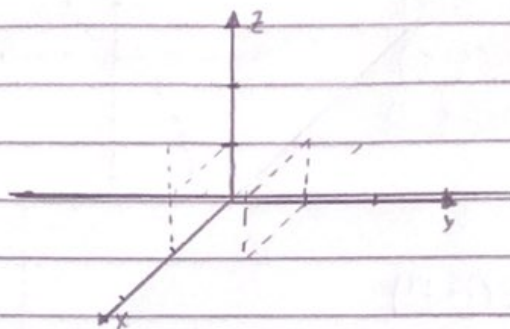


7.9

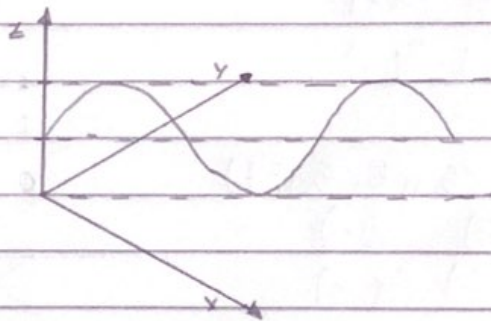
a) $F(t) = (1, t, 1)$

$F(0) = (1, 0, 1)$

$F(1) = (1, 1, 1)$

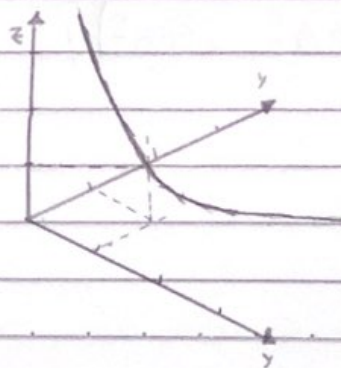


b) $F(t) = (t, t, 1 + \sin(t))$

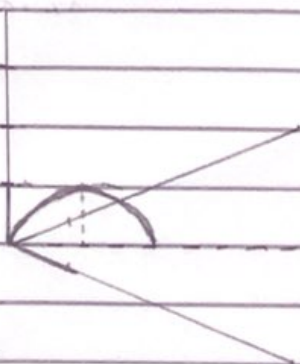


i) $F(t) = (t, t, \frac{7}{t}), t \geq 0$

$F(1) = (1, 1, 1)$



① $f(t) = (1 + \sin t, 1 + \sin t, \cos t)$, $-\frac{\pi}{2} \leq t \leq \frac{\pi}{2}$



② $f(t) = (\underbrace{\ln t}_{\geq 0}, \underbrace{t}_{\geq 0}, \underbrace{\sqrt{1-t^2}}_{t^2 \leq 1}, \underbrace{t^2}_{t^2 \leq 1})$

Def: $\{t \in \mathbb{R}^+ / t \geq 0, t^2 \leq 1\}$

③

$f(t) = \left(\underbrace{t}_{t \geq 2}, \underbrace{\sqrt{\frac{t-2}{t+1}}}_{t \leq \sqrt{5}}, \underbrace{\ln(5-t^2)}_{t \leq \sqrt{5}}, \underbrace{e^{-t}}_{t \leq \sqrt{5}} \right)$

Def: $\{t \in \mathbb{R}^+ / t \geq 2, t \leq \sqrt{5}\}$