i) $\dot{x}=-\frac{\left(t+1\right)x}{t}$

ii) $\dot{x}=-\frac{t^{3}}{\left(x+1\right)^{2}}$

a) Find all the solutions of i) and ii).

b) for i) and ii) Discuss/Give possible choices for a domain $B⊂R^{2}$ such that the IVP with $x\left(t\_{0}\right)=x\_{0}$ has a unique solution.