

3.9

(5) (a) $f^{-1}(x) = -\frac{\ln x}{5} \quad \begin{matrix} \{x|x>0\} \\ \{y|y \in \mathbb{R}\} \end{matrix}$

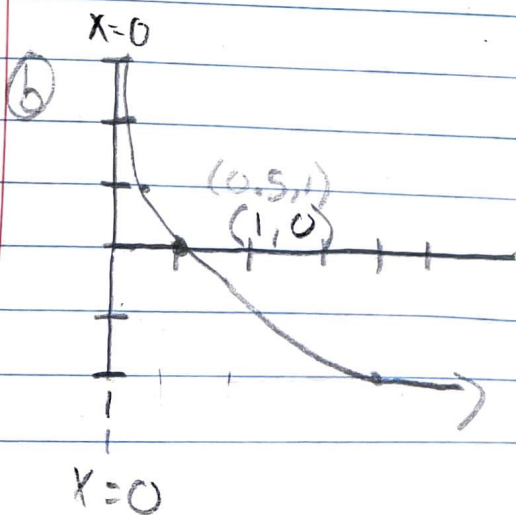
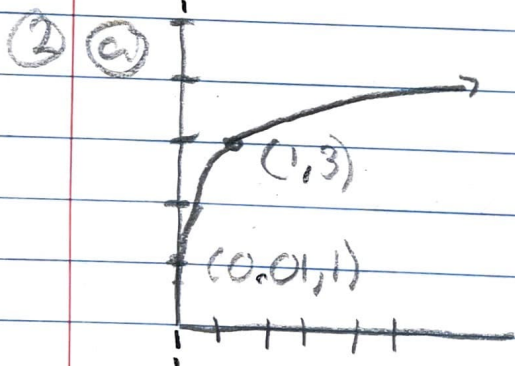
(b) $f^{-1}(x) = 1 + \frac{\ln x}{\ln 3} \quad \begin{matrix} \{x|x>0\} \\ \{y|y \in \mathbb{R}\} \end{matrix}$

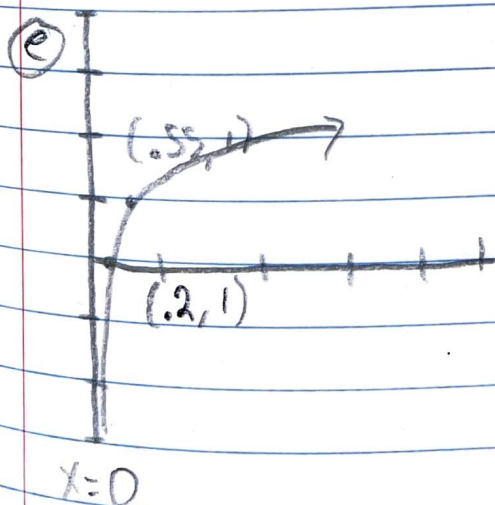
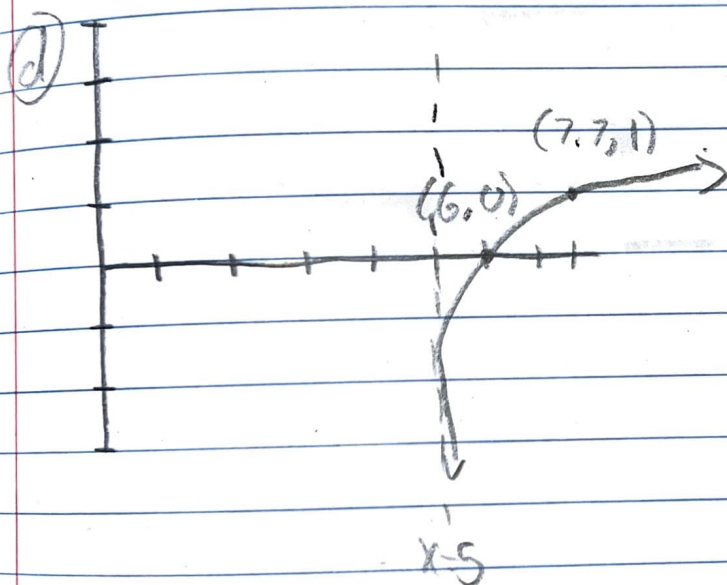
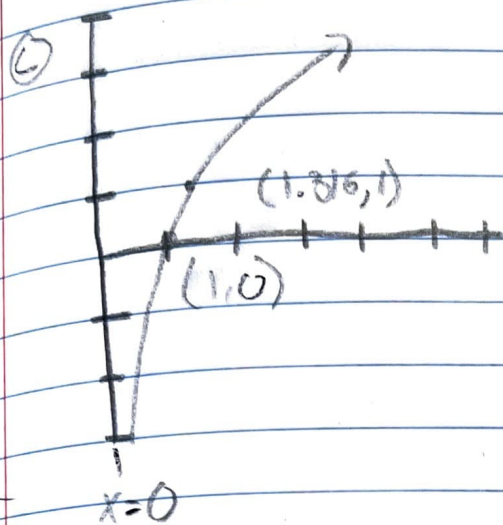
(c) $f^{-1}(x) = \frac{e^x}{2} \quad \begin{matrix} \{x|x \in \mathbb{R}\} \\ \{y|y>0\} \end{matrix}$

(d) $f^{-1}(x) = 2^x + 3 \quad \begin{matrix} \{x|x \in \mathbb{R}\} \\ \{y|y>3\} \end{matrix}$

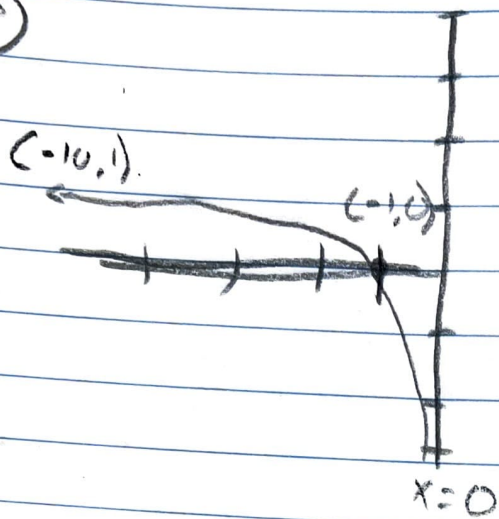
3.10

(1) For $x>0$ and $b>1$ it is increasing

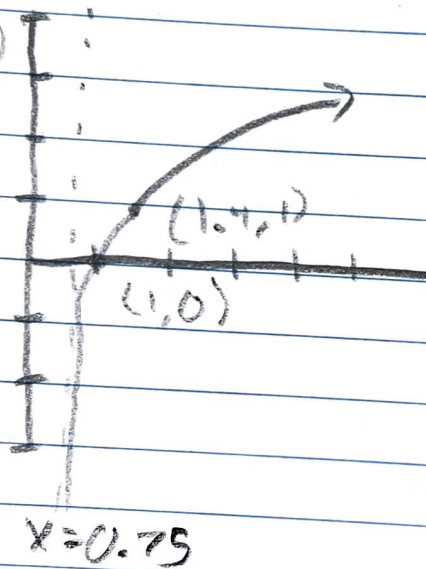




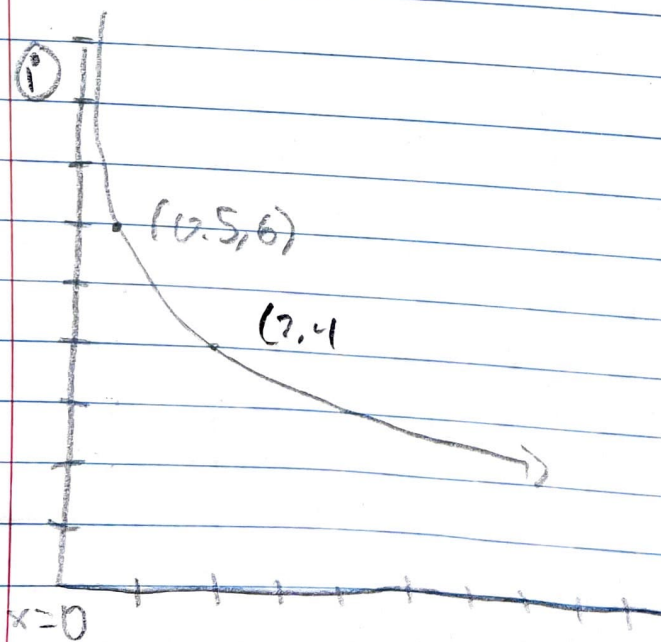
f)

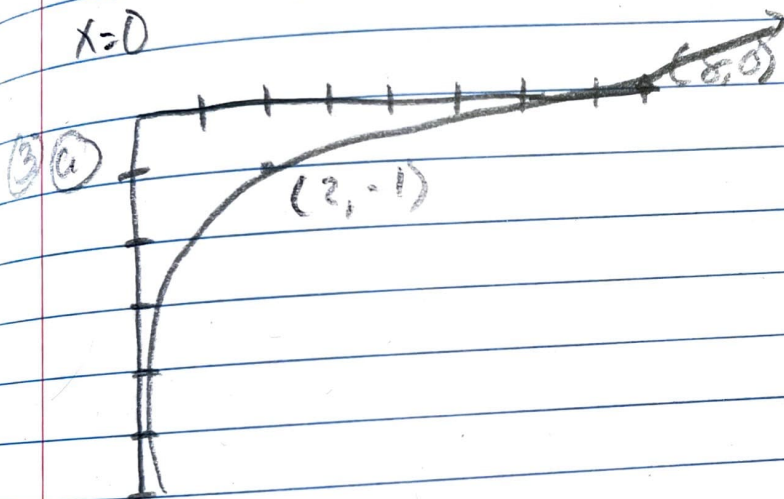
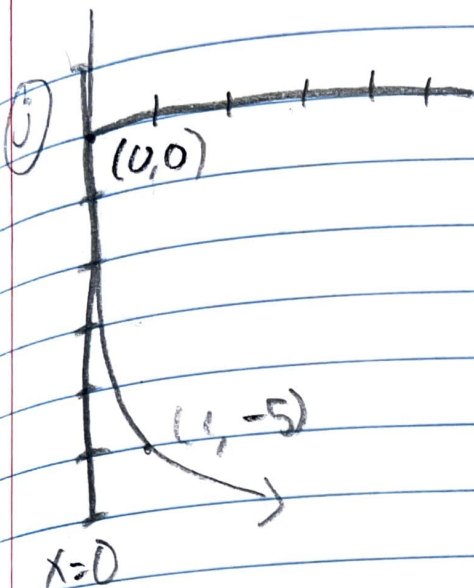


g)



i)





b) same as A

c) $y = \frac{1}{2} \log_2 x - \frac{3}{2}$