Homework on Reading Functions, #3

**1**. Let $A(t)$ and $M(t)$ represent the cost of phone calls with AT&T and MCI as on the sheet *More Reading Functions*.

**a**) State the following in words: $M(A^{-1}(2))$

**b**) If $M(A^{-1}(2)) < 2$, does that make MCI a better deal or a worse deal?

**2**. Let $U(t)$ be the population in millions of the USA in year $t$, using the usual year numbring, e.g., the current year is $t = 1998$. Let $M(t)$ be the population in millions of Mexico in year $t$. State the following in words:

**a**) $U(1990)$

**b**) $M(1995)$

**c**) $U^{-1}(250)$

**d**) $M^{-1}(150)$

**e**) $U^{-1}(50) < 1900$ (By the way, is this claim true?)

**f**) $M^{-1}(U(1900))$

**g**) $M(U^{-1}(250))$

**h**) $\big[M(1990) - M(1980)\big] > \big[U(1920) - U(1900)\big]$

**i**) $\dfrac{M(1990) - M(1980)}{10}$

**j**) $\left[\dfrac{M(1990) - M(1980)}{10}\right] - \left[\dfrac{U(1990) - U(1980)}{10}\right]$