Logic Exercises.

(1) Write the following formulas formally in the appropriate language.
   (a) (Use the language of equality)
      κ_3: "There exist three distinct elements."

   (b) (Use the language of set theory.)
      $\varphi_\subseteq(x, y)$: "$x \subseteq y$".

   (c) (Use the language of group theory.)
      ε: "Any two multiplicative identity elements are equal".

(2) Put the following in prenex form:

$$((\forall x)(x = x) \leftrightarrow (\exists x)(x = x))$$