Human Pedigrees

By studying a human pedigree, you can determine whether a trait is dominant or recessive. To interpret the three pedigrees below, use the same key shown to the right. Of course, the individual with the trait could be homozygous dominant or heterozygous.

A. The pedigree shows the inheritance of attached earlobes for four generations.

Is the trait for attached earlobes, versus free earlobes, dominant or recessive? _recessive._
How do you know? _If it were dominant it could not show up in _F_3 generation unless at least 1 parent in _F_2 had trait._

B. The pedigree shows the inheritance of tongue rolling.

Is this trait dominant or recessive? _dominant._ Explain. _The female parent in _F_1 must be heterozygous dominant or she could not have 2 children with the trait and 1 normal for trait._

C. This pedigree shows the inheritance of colour-blindness, a sex-linked trait.

Is this trait dominant or recessive? _recessive._ Is the mother of the colour-blind girl in the _F_3 generation colour-blind, a carrier, or a person with normal colour vision? _carrier._
Explain. _As a young woman needs 2 copies of gene to be CB, here mother must have carried a gene for trait._