5) No, at room temp I would not expect decomp to occur to any significant extent because K is so small.

b) $2HF \rightleftharpoons H_2 + F_2$

| | | | |
|---|---|---|---|
| I | 1 | 0 | 0 |
| C | $-2x$ | $+x$ | $+x$ |
| E | $(1-2x)$ | $x$ | $x$ |

$$K = 1.0 \times 10^{-95} = \frac{x^2}{(1-2x)}$$

← disregard x here because K is so tiny

$$1.0 \times 10^{-95} = \frac{x^2}{1}$$

$$x = \sqrt{1.0 \times 10^{-95}} = 3.16 \times 10^{-48}$$

$[H_2] = 3.16 \times 10^{-48}$ YES