HW 10/27

5.35) $\delta = \frac{\hbar}{\sqrt{2m(U_0 - E)}} \rightarrow 10^{-9}\ m$

$$\frac{1.055 \cdot 10^{-34}\ Js}{\sqrt{2(9.11 \cdot 10^{-31}\ kg)(U_0 - E)}} \Rightarrow U_0 - E = 6.1 \cdot 10^{-21}\ J$$

$$\boxed{U_0 - E = 0.038\ eV}$$

5.74) a) It could have at most $E = 7$ since there is no turning pt on the right for $E > 7$.

b) KE is max where U is min, $x = 0.1$

c) If E were between 4 and 5 it could be bound in the left well or the right well.

d) No, Its wave function would pass through the intervening classically forbidden region.