16.36:  

a) Since \( f_{\text{beat}} = f_a - f_b \), the possible frequencies are 440.0 Hz \( \pm 1.5 \) Hz = 438.5 Hz or 441.5 Hz.  
b) The tension is proportional to the square of the frequency. Therefore \( T \propto f^2 \) and \( \Delta T \propto 2f\Delta f \). So \( \frac{\Delta T}{T} = \frac{2\Delta f}{f} \).  
i) \( \frac{\Delta T}{T} = \frac{2}{440 \text{ Hz}} \) \( \frac{1.5 \text{ Hz}}{440 \text{ Hz}} = 6.82 \times 10^{-3} \).