

74. Consider two wavelengths,  $\lambda_1$  and  $\lambda_2$ , whose corresponding frequencies are  $f_1$  and  $f_2$ . Then  $\lambda_1 = C/f_1$  and  $\lambda_2 = C/f_2$ . If  $\lambda_1/\lambda_2 = 10$ , then

$$\frac{\lambda_1}{\lambda_2} = \frac{C/f_1}{C/f_2} = \frac{f_2}{f_1} = 10 .$$

The spaces are the same on both scales.