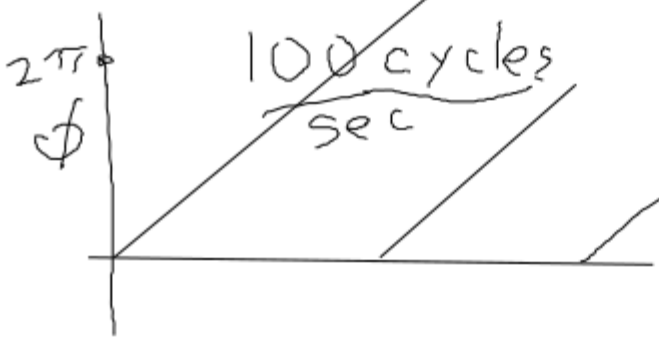
$$\frac{P}{P_{ref}} = \left[\frac{a}{a_{ref}}\right]^2$$

$$\frac{P_1}{P_2}$$



50 cycles
100π rad
101π rad
π rad
1/2 cycle

440 sec⁻¹
442 sec⁻¹

3/4 sec

$\phi = 2\pi 440 \cdot 3/4 + \phi_0$

$\phi = 2\pi 442 \cdot 3/4 + \phi_0$

$(\rightarrow): 2\pi (440 - 442) \cdot 3/4$

$= (-2\pi) \cdot 3/2$

$\sim -2\pi \cdot 1/2$

$\sim -\pi$

$\sim \pi$

$$\log_2\left(\frac{440}{220}\right) = I = 1$$

$$\log_2\left(\frac{?}{440}\right) = 1/2$$

$$2^{1/2} = \frac{?}{440}$$

$$? = 440 \cdot 2^{1/2} = 440\sqrt{2}$$

$$\log_2\left(\frac{?}{440}\right) = 1/12$$

$440^{12}\sqrt{2}$

$$12 \log_2\left(\frac{?}{440}\right) = H = 1$$