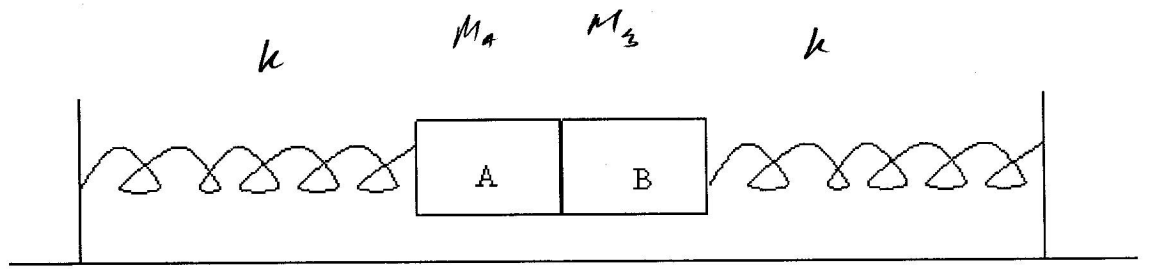


e-19-8-124



$$F = -kx = m\ddot{x}$$

for M_A and M_B

$$x(t) = X_0 \cos(\omega t + \phi)$$

$$\omega = \sqrt{\frac{k}{m}}$$

1/4 - 2020 27 124

$$t = \frac{T}{4} = \frac{2\pi}{\omega} \cdot \frac{1}{4} = \frac{\pi}{2} \cdot \sqrt{\frac{m}{k}}$$

$$v_{max} = \omega X_0 = \sqrt{\frac{k}{m}} X_0$$

$$v(t) = \frac{d}{dt} x(t)$$

(2020 27 124)

$$M_A v_{max} + 0 = 2M v$$

2020 27 124

$$v_n = \frac{v_{max}}{2} = \frac{X_0}{2} \cdot \sqrt{\frac{k}{m}}$$

19-8-12h

five 200 2000 1000

$$F = -k_1x - k_2x = (m_1 + m_2) a$$

$$-2kx = 2ma$$

$$a = -\frac{k}{m}x$$

$$\omega = \sqrt{\frac{k}{m}}$$

200 100 2000 1000 1000

$$\text{2000 } \frac{1}{4} = 1000 \text{ 20 } \frac{1}{2}$$

$$t = \frac{\pi}{2} \cdot \sqrt{\frac{m}{k}}$$

2000 2000 1000

$$x(t) = A \sin(\omega t)$$

(2000 2000 1000)

$$\frac{1}{2} (2k) x_{\max}^2 = \frac{1}{2} (2m) \cdot v_{\max}^2$$

2000 2000 1000 1000

$$k x_{\max}^2 = m \cdot \frac{x_0^2}{4} \cdot \left(\frac{k}{m}\right)$$

$$x_{\max} = \frac{x_0}{2}$$

2000 2000 1000

$$x(t) = \frac{x_0}{2} \sin(\omega t)$$

1000

2000 2000 1000 1000

$$t = \frac{1}{\omega} \arcsin\left(\frac{2x_1}{x_0}\right)$$

$$+\frac{\pi}{2} \sqrt{\frac{m}{k}} \text{ 2000 2000 1000 1000}$$