Typo for 3TR4 Chap5

a) p106,line 5:
Now if the angular velocity of this rotating phasor changes,

b) p108, Eq. (5.9):

$$\begin{aligned} s(t) &= A\cos\{\omega_c t + m_f \sin\omega_0 t\} \\ &= A\left[\cos\omega_c t\cos(m_f\sin\omega_0 t) - \sin\omega_c t\sin(m_f\sin\omega_0 t)\right] \\ &= \mathcal{R}e\left\{Ae^{jm_f\sin\omega_0 t}e^{j\omega_c t}\right\} \end{aligned} \tag{1}$$

c) p108, Eq. (5.10):

$$c_n = \frac{1}{2\pi}\int_{-\pi}^{\pi} e^{j(m_f\sin x - nx)}dx$$

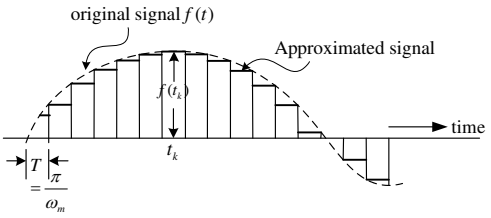
d) p109, Eq. (5.14):

$$\begin{aligned} s(t) =& A\{J_0(m_f)\cos\omega_c t + J_1(m_f)[\cos(\omega_c+\omega_0)t - \cos(\omega_c-\omega_0)t] \\ &+ J_2(m_f)[\cos(\omega_c+2\omega_0)t + \cos(\omega_c-2\omega_0)t] + \cdots\} \end{aligned}$$

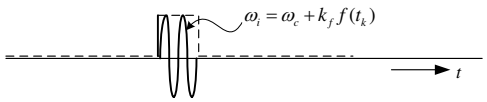
e) p109, Eq. (5.17):

$$\omega_i = \frac{d\theta_i}{dt} = \frac{d}{dt}[\omega_c t + k_f\psi(t)] = \omega_c + k_f f(t) \tag{2}$$

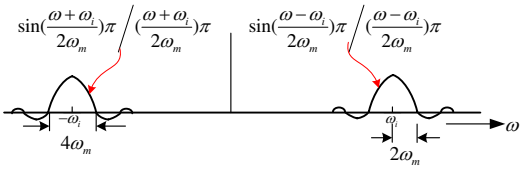
f) p113, Figure 5.5



(a)



(b)

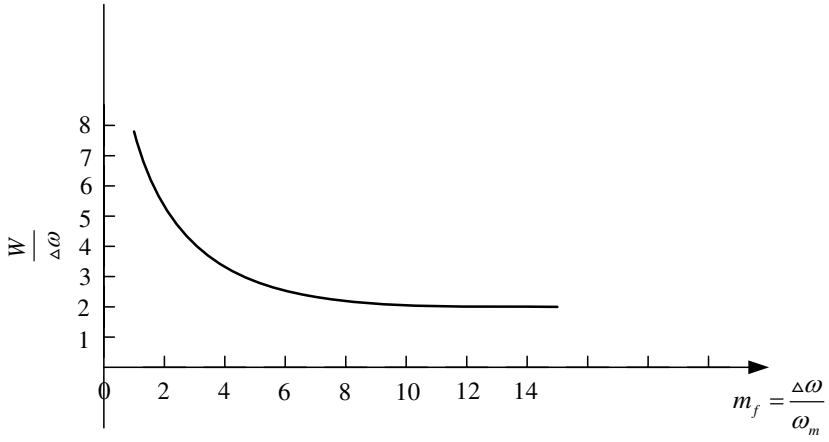


(c)

g) p114, Eq. (5.24): If $\omega_m \ll \Delta\omega$, then

$$W \approx 2\Delta\omega$$

h) p114, Figure 5.6



i) p114, line 5 from the bottom: the modulation index m_f will be given by $\frac{\Delta\omega}{\omega_m} = 15$.

j) p114, last line:

$$W = 2(75 + 2 \times 15) = (2.8 \times 75) \text{ kHz } \simeq 210 \text{ kHz}$$

k) p122, Eq. (5.40):

$$s_{FM}(t) = ARe\left[(1 + jm_2 \sin\omega_2 t)e^{j\omega_c t}\right] \tag{3}$$

l) p128, Figure 5.13