$c = 3 \times 10^8$ m/s (in free space), $c = 2 \times 10^8$ m/s (in media), 1 km $= 10^3$ m, 1 ms $= 10^{-3}$ s, 1 Mb $= 10^6$ b

$$\mathcal{F}\{\text{rect}(t/T)\} = T\text{sinc}(fT) = T\sin(\pi fT)/\pi fT$$
$$\mathcal{F}\{\text{sinc}(t/T)\} = T\text{rect}(fT)$$
$$\mathcal{F}\{1 - |\tau|/T\} = T\text{sinc}^2(fT)$$
$$\sin(a+b) = \sin a\cos b + \cos a\sin b, \cos(a+b) = \cos a\cos b - \sin a\sin b$$
$$\sin(a \pm b) = \sin a\cos b \pm \cos a\sin b, \cos(a \pm b) = \cos a\cos b \mp \sin a\sin b$$
$$\sin 2a = 2\sin a\cos a, \cos 2a = \cos^2 a - \sin^2 a = 2\cos^2 a - 1$$
$$\cos a = (e^{ja} + e^{-ja})/2, \sin a = (e^{ja} - e^{-ja})/j2, \tan a = \sin a/\cos a$$
$$\psi_x(f) = |X(f)|^2, G_x(f) = \sum |c_n|^2\delta(f - nf_o), G_x(f) = \lim_{T\to\infty} \tfrac{1}{T}|X_T(f)|^2$$
$$R_x(\tau) = \int_{-\infty}^{\infty} x(t)x(t+\tau)\text{d}t, R_x(\tau) = \lim_{T\to\infty} \tfrac{1}{T}\int_{-\infty}^{\infty} x(t)x(t+\tau)\text{d}t$$
$$c_n = \int_{-\infty}^{\infty} x(t)\exp(-j2\pi nf_o t)\text{d}t$$
$$\text{SNR [dB]} = 10\log(\text{SNR}), SNR_{q,dB} = 6.02b + 10.8 + 10\log(\sigma_x^2/V_{pp}^2), SNR_j = 3/(\sigma_t^2 + f_H^2)$$