Chapter 4
Philip Bock

4.2) SNR = 50.4 SNR dB = 10log (0.5/4.4 *10^-6)

4.3)
(a) 3 km
(b) 20 km
(c) 2.5 km
(d) 5 km
(e) 2.2 km

4.4)
can support longer distances and more stations per line because the outer conductor is
braided shielded, and so that anything that is absorbed is conducted to ground as well as
reduce the noise that's on the outer conductor.

4.5)
20log4 pi fd /c
if f = 10 and d = 20
then = -102

if double f = 20
then –96

so 6-7 loss

if double d = 40
then –95
then same loss

4.9) doubling the area will give you more power

4.13)
(a) 10log50W = 17dBW, 17dBW + 30 = 47 dBm
(b) 186dBm
(c) 226dBm
(d) 18.9*10^12

4.16)
80km = 3.57 sqrt4/3*h
h = 377 million meters