

Quiz 4:
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Name: KEY

This quiz is based on a reading material from the text book Proakis (5.2.10 Comparison of Digital Modulation Methods)

State True or False. Please fill in the table (F or T)

1. For multiphase signals, $W = \frac{M}{\log_2 R}$.
2. In terms of bandwidth efficiency, PAM single-sideband is a factor of 2 better than PSK.
3. QAM and PAM have the same bandwidth efficiency.
4. In orthogonal signals, when the symbol duration is 1 micro-second., the minimum required frequency separation is 1 MHz
5. For orthogonal signals, the bandwidth does not change with M .
6. Bi-orthogonal signals require double the bandwidth of orthogonal signals.
7. M-ary orthogonal signals are appropriate for digital microwave radio channels
8. The channel capacity serves as a upper bound on the bandwidth efficiency of any type of modulation.
9. $\frac{E_b}{N_0} = -1.6$ dB is equivalent to $\frac{E_b}{N_0} = 0.396$.
10. In the power limited region, $\frac{R}{W} < 1$.

Q	1	2	3	4	5	6	7	8	9	10
A	F	T	T	F	F	F	F	T	F	T