第二次作业答案

11. 答案：(25')

采用公式：$S = (1/r) \times N$

a. $r = \log_2 2 = 1$，$S = (1/1) \times 2000\text{bps} = 2000 \text{ baud}$

b. $r = \log_2 2 = 1$，$S = (1/1) \times 4000\text{bps} = 4000 \text{ baud}$

c. $r = \log_2 4 = 2$，$S = (1/2) \times 6000\text{bps} = 3000 \text{ baud}$

d. $r = \log_2 64 = 6$，$S = (1/6) \times 36000\text{bps} = 6000 \text{ baud}$

13. 答案：(25')

采用公式：$r = \log_2 L$

a. $r = \log_2 4 = 2$

b. $r = \log_2 8 = 3$

c. $r = \log_2 4 = 2$

d. $r = \log_2 128 = 7$

17. 答案(25')：

主要采用公式：$B = (1 + d) \times (1/r) \times N$，但 b 小题需额外注意

a. $r = \log_2 2 = 1$，$B = (1 + 1) \times (1/1) \times 4000\text{bps} = 8\text{KHz}$

b. $r = \log_2 2 = 1$

$\quad B = (1 + 1) \times (1/1) \times 4000\text{bps} + 4\text{KHz} = 12\text{KHz}$

c. $r = \log_2 4 = 2$，$B = (1 + 1) \times (1/2) \times 4000\text{bps} = 4\text{KHz}$

d. $r = \log_2 16 = 4$，$B = (1 + 1) \times (1/4) \times 4000\text{bps} = 2\text{KHz}$

18. 答案(25'):

采用公式: $N = S \times r = [1/(1+d)] \times r \times B$

a. $r = \log_2 2 = 1$, $N = [1/(1+0)] \times 1 \times 4\text{KHz} = 4\text{kbps}$

b. $r = \log_2 4 = 2$, $N = [1/(1+0)] \times 2 \times 4\text{KHz} = 8\text{kbps}$

c. $r = \log_2 16 = 4$, $N = [1/(1+0)] \times 4 \times 4\text{KHz} = 16\text{kbps}$

d. $r = \log_2 64 = 6$, $N = [1/(1+0)] \times 6 \times 4\text{KHz} = 24\text{kbps}$