2.1 QUIZ QUESTION 1 (1/1 point)

Suppose we sample a signal at frequency F_s. If we collect 1500 samples in 5 seconds, what is F_s in Hz?

Please key in the numerical value of your answer in the box provided below.

300

300

Answer: 300

EXPLANATION

The sampling frequency F_s=1500/5=300samples/sec=300Hz.

Check Save Hide Answer *You have used 1 of 3 submissions*

2.1 QUIZ QUESTION 2 (1/1 point)

Compact discs record two channels (left and right) of music at a sampling frequency of $F_s = 44.1\text{kHz}$. If each sample is encoded with 16 bits, and one byte is 8 bits, how many bytes are required to store one minute of music?

Please key in the numerical value of your answer in the box provided below.

10584000

10584000

Answer: 10584000

EXPLANATION

Each sample requires 2 bytes. There are 60 seconds in one minute. Thus, the total number of bytes required is

$$60\text{sec/channel} * 44,100\text{sample/sec} * 2\text{bytes/sample} * 2\text{channel} = 10,584,000\text{bytes}$$

Help

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