Spectrum of Sampled Signal

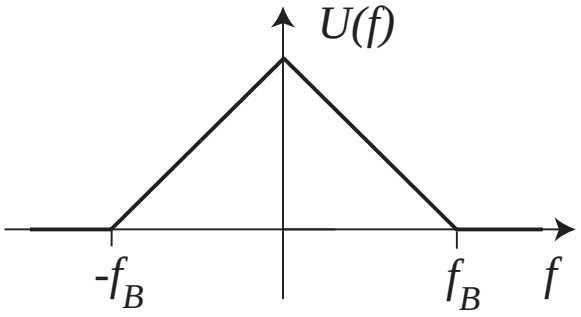
Consider the signal

$$y(t) = w(t)u(t)$$

where

$$w(t) = \sum_{n=-\infty}^{\infty} \delta(t - nT)$$

is the carrier signal, and $u(t)$ is the modulating signal. $u(t)$ has spectrum (Fourier transform) as shown below:



The sample rate, $f_s = \frac{1}{T}$, satisifies the relation

$$f_s > 2f_b$$

Sketch the spectrum of $y(t)$ on a 3×5 card.

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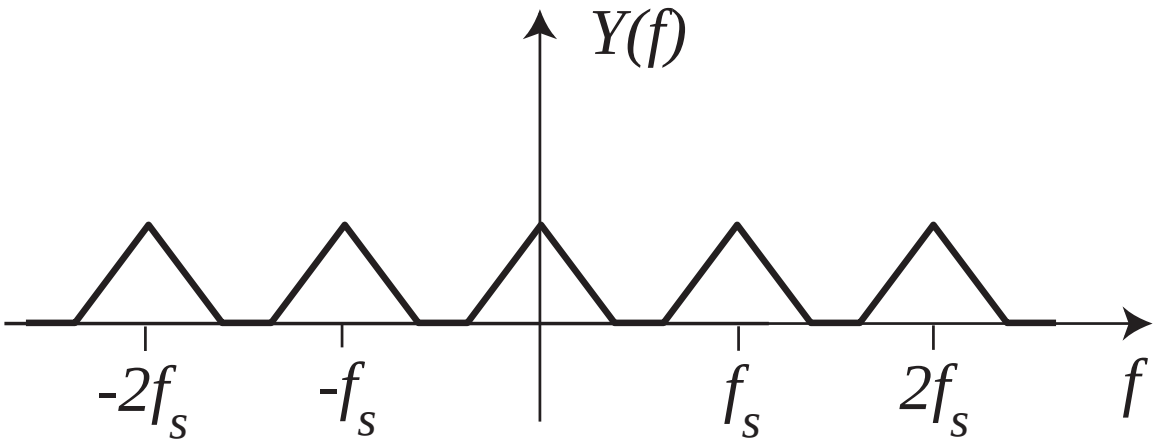
Sketch the spectrum of $y(t)$ on a 3×5 card. My confidence that I have the correct answer is:

1. 100%
2. 80%
3. 60%
4. 40%
5. 20%
6. 0%

Spectrum of Sampled Signal

The transform of $y(t)$ is given by:

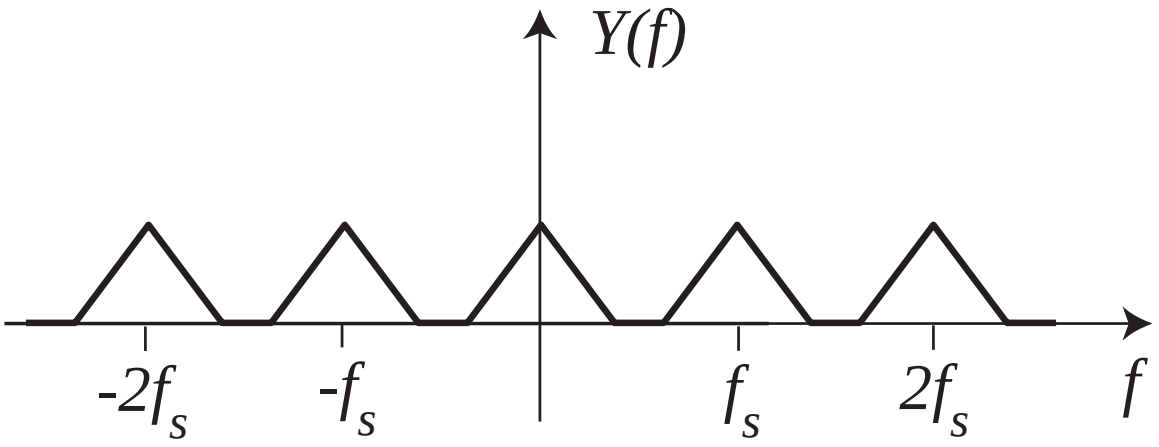


My answer

1. Was completely correct
2. Was mostly correct, with one or two minor errors
3. Had many errors
4. Was completely incorrect

Spectrum of Sampled Cosine

A signal $x(t) = \cos$ The transform of $y(t)$ is given by:



My answer

1. Was completely correct
2. Was mostly correct, with one or two minor errors
3. Had many errors
4. Was completely incorrect