BIBO Stability

Consider the system G with transfer function

$$G(a) = \frac{1}{\sqrt{s}}$$

Is the system G BIBO stable?

1. Yes
2. No
3. Don’t know

BIBO Stability

Consider the system G with transfer function

$$G(a) = \frac{1}{\sqrt{s}}$$

Is the system G BIBO stable?

1. Yes
2. ♡ No
3. Don't know

Bilateral Laplace Transform

Find the Laplace transform and region of convergence of the signal

$$g(t) = \sigma(-t) = \begin{cases} 1, & t \leq 0 \\ 0, & t > 0 \end{cases}$$

The Laplace transform is

1. $G(s) = \frac{1}{s}, \ \mathrm{Re}[s] > 0$
2. $G(s) = -\frac{1}{s}, \ \mathrm{Re}[s] > 0$
3. $G(s) = \frac{1}{s}, \ \mathrm{Re}[s] < 0$
4. $G(s) = -\frac{1}{s}, \ \mathrm{Re}[s] < 0$
5. Don’t know

Bilateral Laplace Transform

Find the Laplace transform and region of convergence of the signal

$$g(t) = \sigma(-t) = \begin{cases} 1, & t \leq 0 \\ 0, & t > 0 \end{cases}$$

The Laplace transform is

1. $G(s) = \frac{1}{s}, \ \mathrm{Re}[s] > 0$
2. $G(s) = -\frac{1}{s}, \ \mathrm{Re}[s] > 0$
3. $G(s) = \frac{1}{s}, \ \mathrm{Re}[s] < 0$
4. ♡ $G(s) = -\frac{1}{s}, \ \mathrm{Re}[s] < 0$
5. Don't know

Recitation Exercises I

During the last few lectures, Profs. Hall and Waitz have had the class work one or two problems at the board, rather than giving the class problems to work at their desks, or having the professor lecture at the board. Please indicate your assessment of the utility of this approach, by indicating your agreement with the follwong statement:

“Working at the board in recitations is a more useful technique than working at my desk on a problem or watching the instructor work a problem, and is a more effective way to learn during recitation.”

1. Strongly agree
2. Agree
3. Neutral
4. Disagree
5. Strongly disagree
6. I have not been to a recitation where students work problems at the board.

Recitation Exercises II

During the last few lectures, Profs. Hall and Waitz have had the class work one or two problems at the board, rather than giving the class problems to work at their desks, or having the professor lecture at the board. Please indicate your assessment of the utility of this approach, by indicating your agreement with the follwong statement:

“I enjoy working at the board in recitations, and prefer working at the board to working at my desk on a problem or watching the instructor work a problem.”

1. Strongly agree
2. Agree
3. Neutral
4. Disagree
5. Strongly disagree
6. I have not been to a recitation where students work problems at the board.

Transfer Function of Smoother

A “smoother” has impulse response

$$g(t) = \begin{cases} \frac{1}{2}e^{t}, & t < 0 \\ \\ \frac{1}{2}e^{-t}, & t \geq 0 \end{cases}$$

Find the transfer function, $G(s)$, of the smoother, including the region of convergence.

My confidence that I have the correct answer is:

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

Transfer Function of Smoother

The transfer function of the smoother with impulse response

$$g(t) = \begin{cases} \frac{1}{2}e^{t}, & t < 0 \\ \\ \frac{1}{2}e^{-t}, & t \geq 0 \end{cases}$$

is

$$G(s) = \frac{-1}{(s+1)(s-1)}, \ -1 < \mathrm{Re}[s] < 1$$

My answer

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