Laplace Transform of Unit Ramp

The Laplace Transform of the signal

$$g(t) = \begin{cases} t, & t \geq 0 \\ 0, & t < 0 \end{cases}$$

is

1. $-\dfrac{1}{s^2}, \quad \text{Re}[s] < 0$

2. $-\dfrac{1}{s^2}, \quad \text{Re}[s] > 0$

3. $\dfrac{1}{s^2}, \quad \text{Re}[s] < 0$

4. $\dfrac{1}{s^2}, \quad \text{Re}[s] > 0$

5. None of the above

6. Don't know

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The Laplace Transform of the signal

$$g(t) = \begin{cases} t, & t \geq 0 \\ 0, & t < 0 \end{cases}$$

is

The correct answer is:

1. $-\dfrac{1}{s^2}, \quad \text{Re}[s] < 0$

2. $-\dfrac{1}{s^2}, \quad \text{Re}[s] > 0$

3. $\dfrac{1}{s^2}, \quad \text{Re}[s] < 0$

4. ♡ $\dfrac{1}{s^2}, \quad \text{Re}[s] > 0$

5. None of the above

6. Don't know

Transfer Function of Cascaded Systems

Consider a system that is itself a cascade of two systems. What is the transfer function of the system. That is, if the input to the system is a unit exponential, what is the output?

e^{st} → G → F → ?
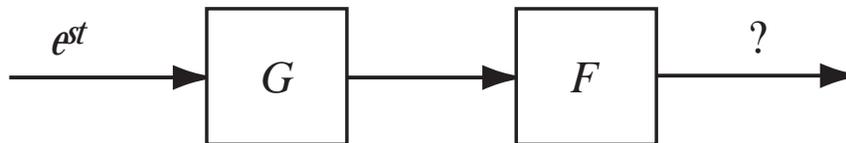
My confidence that I have the correct answer is:

1. 100%

2. 80%

3. 60%

4. 40%

5. 20%

6. 0%

Transfer Function of Cascaded Systems

The transfer function of the system
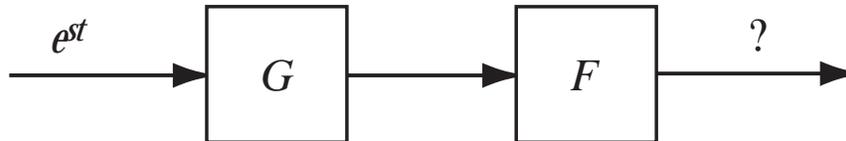
is $F(s)G(s)$, since the output of the system is $F(s)G(s)e^{st}$. My answer

1. Was completely correct

2. Was mostly correct, with one or two minor errors

3. Had many errors

4. Was completely incorrect