Response of Smoother to Pulse

A pulse, $u(t)$, is the input to a smoother, with impulse response $g(t)$.

Sketch the output, $y(t)$.

My confidence that I have the correct answer is:

1. 100%
2. 80%
3. 60%
4. 40%
5. 20%
6. 0%
Response of Smoother to Pulse

A pulse, \( u(t) \), is the input to a smoother, with impulse response \( g(t) \).

Sketch the output, \( y(t) \).
Response of Smoother to Pulse

My answer looks most like:

1. ![Graph 1]
2. ![Graph 2]
3. ![Graph 3]
4. ![Graph 4]
5. ![Graph 5]
6. ![Graph 6]

7. Some combination of the above
8. None of the above
Response to Bilateral Signal

A system $G$ has impulse response

$$g(t) = e^{-at} \sigma(t)$$

with $a > 0$. Find the response, $y(t)$, of the system to the input

$$u(t) = e^{at} \sigma(-t)$$

using Laplace transform methods.

My confidence that I have the correct answer is:

1. 100%
2. 80%
3. 60%
4. 40%
5. 20%
6. 0%
Response to Bilateral Signal

The response of a system $G$ with impulse response

$$g(t) = e^{-at} \sigma(t)$$

to the input

$$u(t) = e^{at} \sigma(-t)$$

is

$$y(t) = \frac{1}{2a} e^{-at} \sigma(t) + \frac{1}{2a} e^{at} \sigma(-t)$$

My answer

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