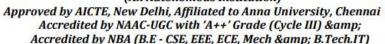




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Laplace Transform Puzzle:

You are given a time-domain function:

$$f(t)=3e^{2t}$$

Question:

What is the Laplace Transform $F(s) = \mathcal{L}\{f(t)\}$ of this function?

Hint:

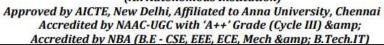
Use the standard Laplace transform rule:

$$\mathcal{L}\{e^{at}\} = rac{1}{s-a}, \quad ext{for } s>a$$

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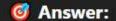


Given:

$$f(t) = 3e^{2t}$$

Using the Laplace transform rule:

$$\mathcal{L}\{3e^{2t}\} = 3\cdot\mathcal{L}\{e^{2t}\} = 3\cdotrac{1}{s-2} = rac{3}{s-2}$$



$$\left|\mathcal{L}\{3e^{2t}\}=rac{3}{s-igstar}
ight|,\quad ext{for }s>2$$