

E&M 2025 HW10

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Technion

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1 Question 1

1.1 Part 1

Show that

$$\left| \int_0^t dt' e^{i\omega t'} \right|^2 = \frac{\sin^2\left(\frac{\omega t}{2}\right)}{\left(\frac{\omega}{2}\right)^2} (1)$$