

Verifying capacitor discharge rate

Learning Goals:
 Use the discharge equations to verify exponential relationships
 Calculate and predict time constants for different combinations of CR

$$CR$$

$$V = V_0 e^{-t/RC}$$

$$V = V_0 e^{-1}$$

$$V = 0.37V_0$$

Feb 9-09:47

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Capacitance	Resistance	time constant	Measured time constant

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Plenary:
 A capacitor takes 3s to fall from a voltage of 6V to a voltage of 2.2V

a) How long will it take to fall to 0.11V?

b) What would happen to this time if the resistance of the circuit was doubled?

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Feb 9-10:40

A series of ten horizontal lines stacked vertically, providing space for handwritten notes or calculations.