Monday 16 June

Consider the following circuit with an initially uncharged capacitor. What is the initial current after the switch is closed?



1) 24.0 A
2) 12.0 A
3) 3.0 A
4) 2.4 A
5) 1.2 A

Consider the following circuit with an initially uncharged capacitor. After the switch has been closed for a long time, what is the charge on the capacitor?



- 1) 24.0 mC
- 2) 4.0 mC
- 3) 2.4 mC
- 4) 100.0 mC
- 5) 0.6 mC

Consider the vectors shown below.



Which of the following quantities are vectors pointing in the same direction?

A × B & B × A
A × B & (-F)
E × D & F
B × D & (-F)
C × B & A·B
A × B & B × D

A negatively charged muon (μ^{-}) enters a region of space with a magnetic field as shown. What is the direction of the magnetic force on the muon?



An electron enters a region of space with a uniform magnetic field $B = B_o \hat{k}$ as shown. What is the direction of the magnetic force on the electron?



Consider a strong magnetic field directed into the page as shown and confined to the shaded region. If a charge particle enters (v is in the plane of the page) as shown, which of the paths shown is a possible trajectory?



Consider a strong magnetic field directed into the page as shown and confined to the shaded region. A positively charged particle enters and exits the magnetic field region as shown. As a result of traveling through the field, the particle's kinetic energy

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