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PP C – Current – p. 609

1. If the current in a wire of a CD player is 5.00 mA, how long would it take for 2.00 C of charge to pass through a cross-sectional area of this wire?
2. In a particular television tube, the beam current is 60.0 μA. How long does it take for 3.75 x 1014 electrons to strike the screen? (Hint: Recall that an electron has a charge of -1.60 x 1019C.)

1. If a metal wire carries a current of 80 mA, how long does it take for 3.00 x 1020 electrons to pass a given cross-sectional area of wire?
2. The compressor on an air conditioners draws 40.0A when it starts up. If the start-up time is 0.50 s, how much charge passes a cross-sectional area of the circuit in this time?
3. A total charge of 9.0 mC passes through a cross-sectional area of a nichrome wire 3.5 C.
4. What is the current in the wire.
5. How many electrons pass through the cross-sectional area in 10.0 s?
6. If the number of charges that pass through the cross-sectional area during the given time interval doubles, what is the resulting current?