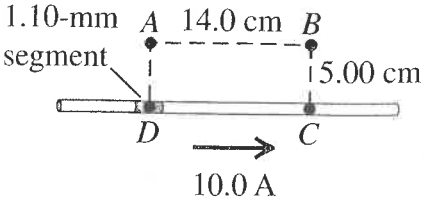
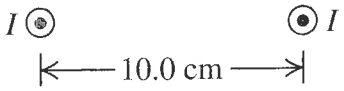
28.9 • A straight wire carries a 10.0-A current (**Fig. E28.9**). *ABCD* is a rectangle with point *D* in the middle of a 1.10-mm segment of the wire and point *C* in the wire. Find the magnitude and direction of the magnetic field due to this segment at (a) point *A*; (b) point *B*; (c) point *C*.

Figure E28.9



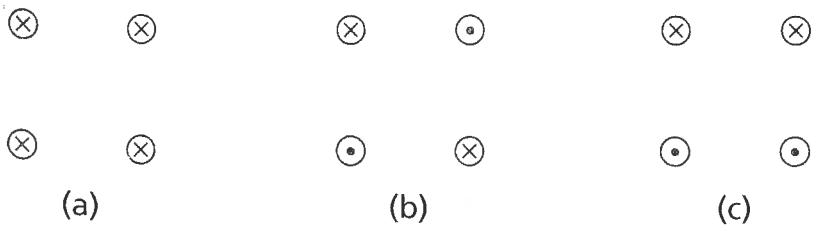
28.23 • Two long, straight, parallel wires, 10.0 cm apart, carry equal 4.00-A currents in the same direction, as shown in **Fig. E28.23**. Find the magnitude and direction of the magnetic field at (a) point P_1, midway between the wires; (b) point P_2, 25.0 cm to the right of P_1; (c) point P_3, 20.0 cm directly above P_1.

Figure E28.23



28.25 • Four, long, parallel power lines each carry 100-A currents. A cross-sectional diagram of these lines is a square, 20.0 cm on each side. For each of the three cases shown in **Fig. E28.25**, calculate the magnetic field at the center of the square.

Figure E28.25



28.27 •• Two very long insulated wires perpendicular to each other in the same plane carry currents as shown in **Fig. E28.27**. Find the magnitude of the *net* magnetic field these wires produce at points *P* and *Q* if the 10.0-A current is (a) to the right or (b) to the left.

Figure E28.27