

- 21** An electric current flowing through a wire produces a magnetic field around the wire. Four wires carrying identical currents are shown placed at the corners of a square. Each wire produces a field of flux density  $B$  at the centre of the square. The symbol  $\oplus$  indicates a current flowing along the wire into the page, and the symbol  $\ominus$  indicates a current flowing along the wire pointing out of the page. What is the magnetic field at the centre of the square?



- A** 0      **B** 2.8  $B$       **C** 3.2  $B$       **D** 4.0  $B$