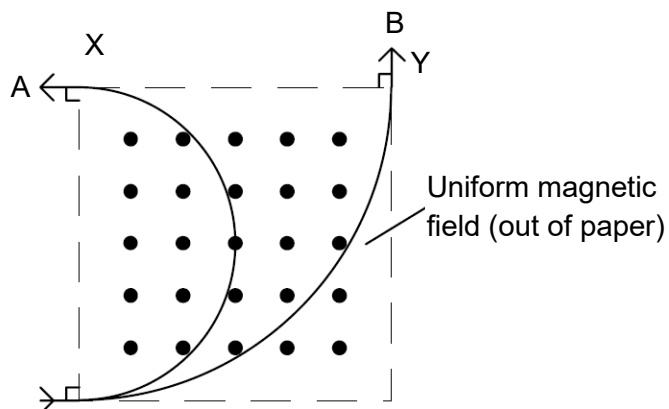24 Particles *A* and *B*, both moving at the same speed, enter a square region of uniform magnetic field as shown in the figure below. Particle *A* leaves at *X* while particle *B* leaves at *Y*.

If the ratio of charge to mass of particle *A* is *k*, what is that of particle *B*?

A $\dfrac{k}{2}$ **B** $\dfrac{k}{4}$ **C** $2k$ **D** $4k$