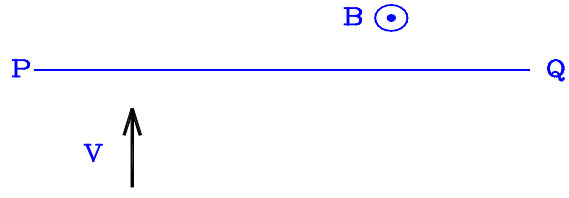
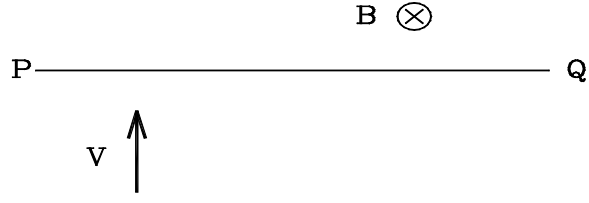
A positively charged particle enters a uniform magnetic field at right angles to the field and to the boundary PQ as shown. The centre of the circular path of the charged particle in the magnetic field

A) lies on the boundary
B) lies inside the boundary
C) lies outside the boundary
D) any of these depending on v



A positively charged particle enters a uniform magnetic field at right angles to the field and to the boundary PQ as shown. This charged particle

A) does not emerge from the field
B) emerges from a point to the left of point of entry
C) emerges from a point to the right of point of entry
D) continue to travel along a straight line



A positively charged particle enters a uniform magnetic field at right angles to the field and at an angle to the boundary PQ as shown. The centre of the circular path of the charged particle in the magnetic field

A) lies on the boundary
B) lies inside the boundary
C) lies outside the boundary
D) any of these depending on v

A positively charged particle enters a uniform magnetic field at right angles to the field and at an angle to the boundary PQ as shown. This charged particle

A) does not emerge from the field
B) emerges from a point to the left of point of entry
C) emerges from a point to the right of point of entry
D) continue to travel along a straight line

A positively charged particle enters a uniform magnetic field at right angles to the field and at an angle to the boundary PQ as shown. It emerges from the field after a time t_1. If magnetic field were in the opposite direction, it emerges from the field after a time t_2

A) $t_1 = t_2$ B) $t_1 > t_2$

C) $t_1 < t_2$ D) None

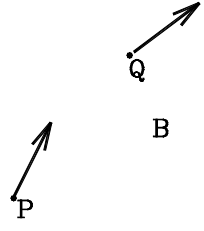
A charged particle is moving in the plane of the figure in a magnetic field directed at right angles to the plane. It's velocity when it is at P and then a little later when at Q is directed as shown. If magnetic field (B) out of the plane is taken as positive and q is the charge of the particle

A) $B > 0$ and $q > 0$

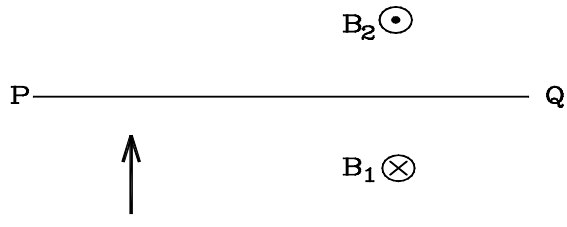
B) $B < 0$ and $q < 0$

C) $B > 0$ and $q < 0$

D) $B=0$ and $q=0$



A positively charged particle has a velocity directed as shown. Magnetic field B_1 in the lower region is directed in to the plane. The charged particle crosses the boundary at some point A in to the second magnetic field B_2 directed out of the plane. It emerges from the second field in to the first at some point B



A) B is to the right of A
B) B is to the left of A
C) B and A are the same point
D) Any of these

A charged particle Q is located at A and has a velocity V directed as shown. It will cross the boundary PQ if

A) Q > 0, B is large and V is low

B) Q < 0, B is large and V is low

C) Q > 0, B is weak and V is low

D) Q > 0, B is weak and V is high