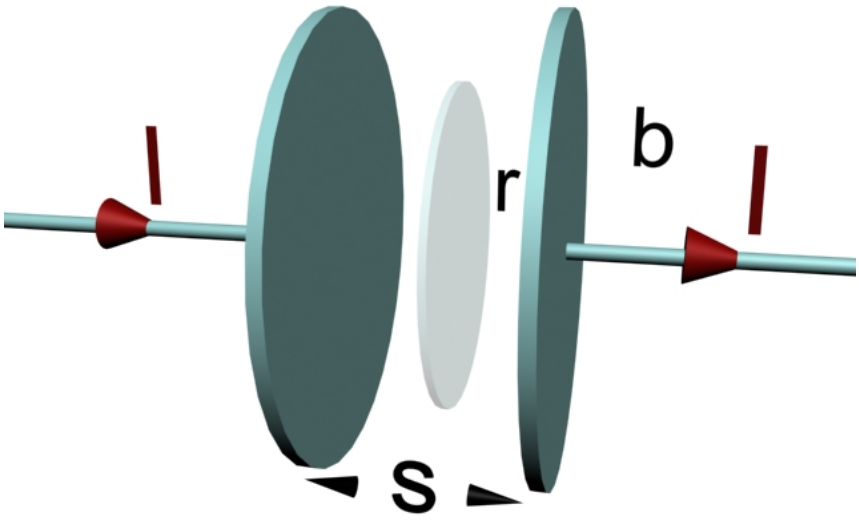
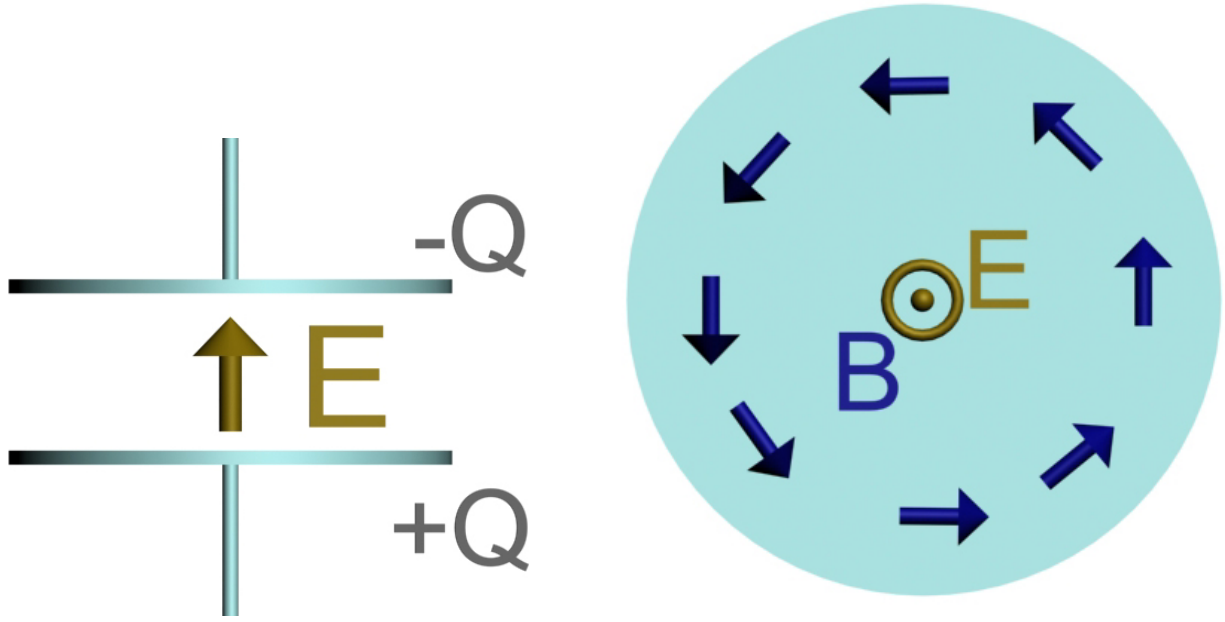


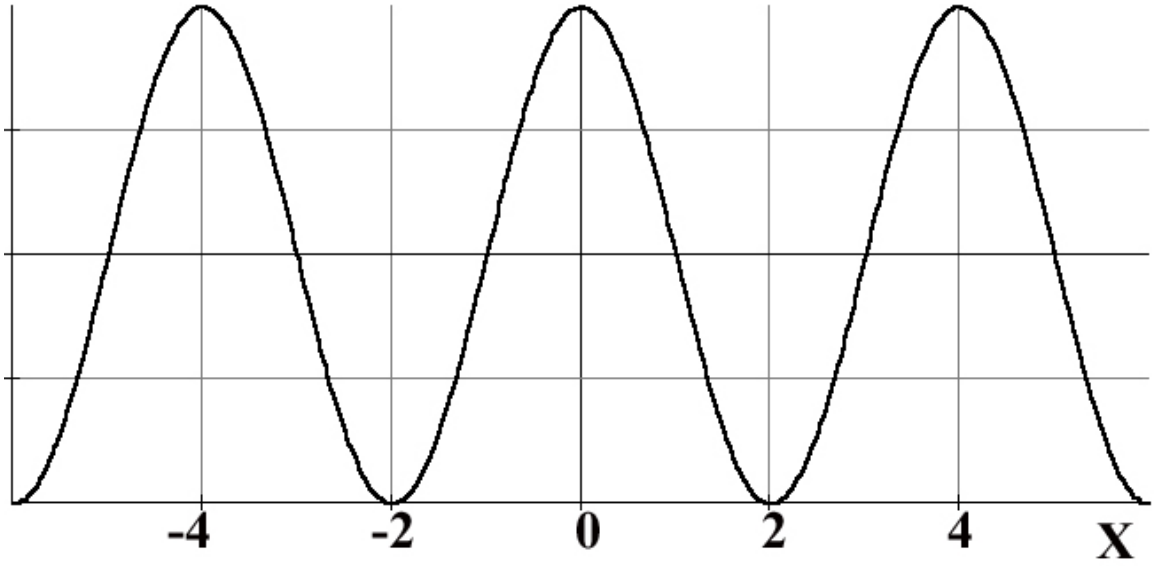
Consider the above circular capacitor, and the Amperian loop (radius *r*) in the plane midway between the plates. When the capacitor is charging, the line integral of the magnetic field around the Amperian loop is

1. Zero: No current crosses the surface spanning the Amperian loop
2. Zero: The magnetic field is perpendicular to the Amperian Loop
3. Non-zero: An electric current flows between the capacitor plates
4. Non-zero: There is time changing electric flux on the surface spanning the Amperian Loop



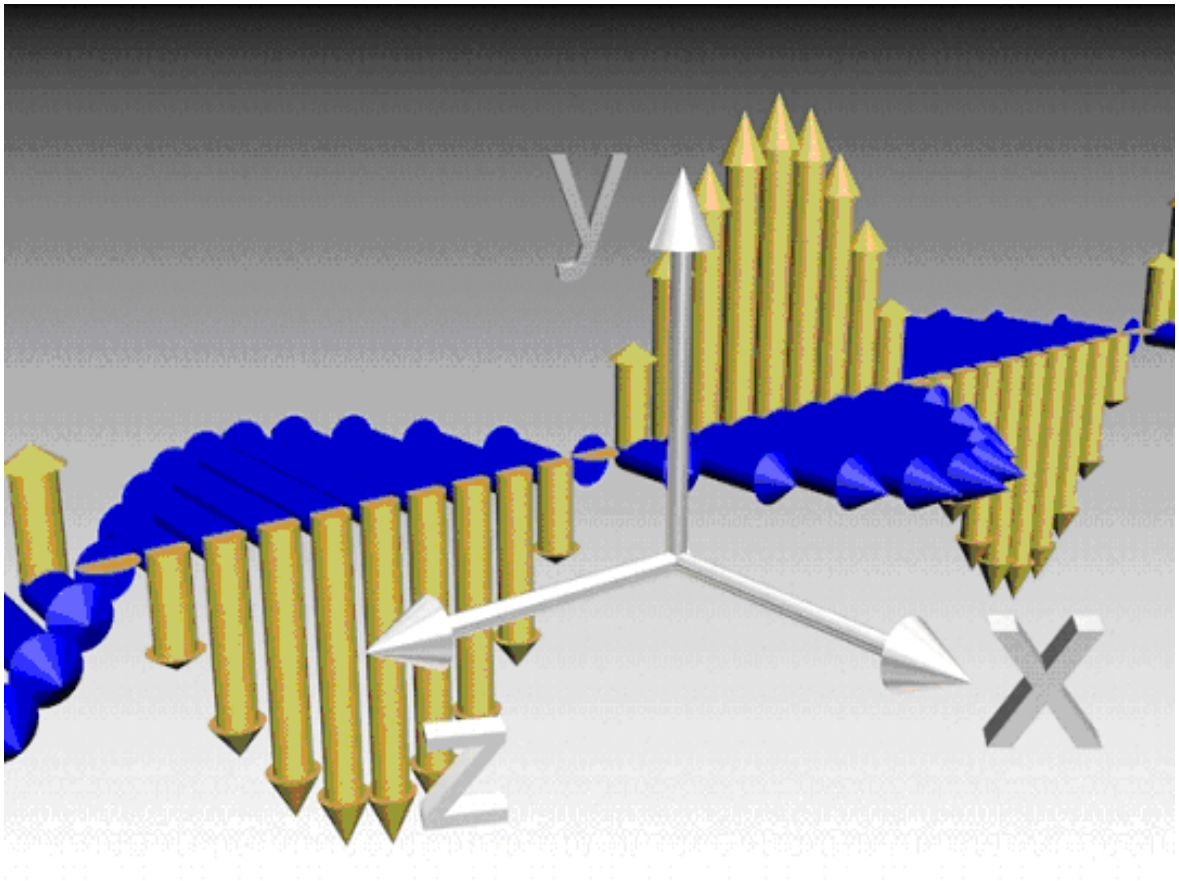
The plot above shows a side and a top view of a capacitor with charge *Q* with electric and magnetic fields E and B at time *t*. The charge *Q* is:

1. **Increasing in time**
2. **Constant in time.**
3. **Decreasing in time.**
4. **Don’t have a clue.**



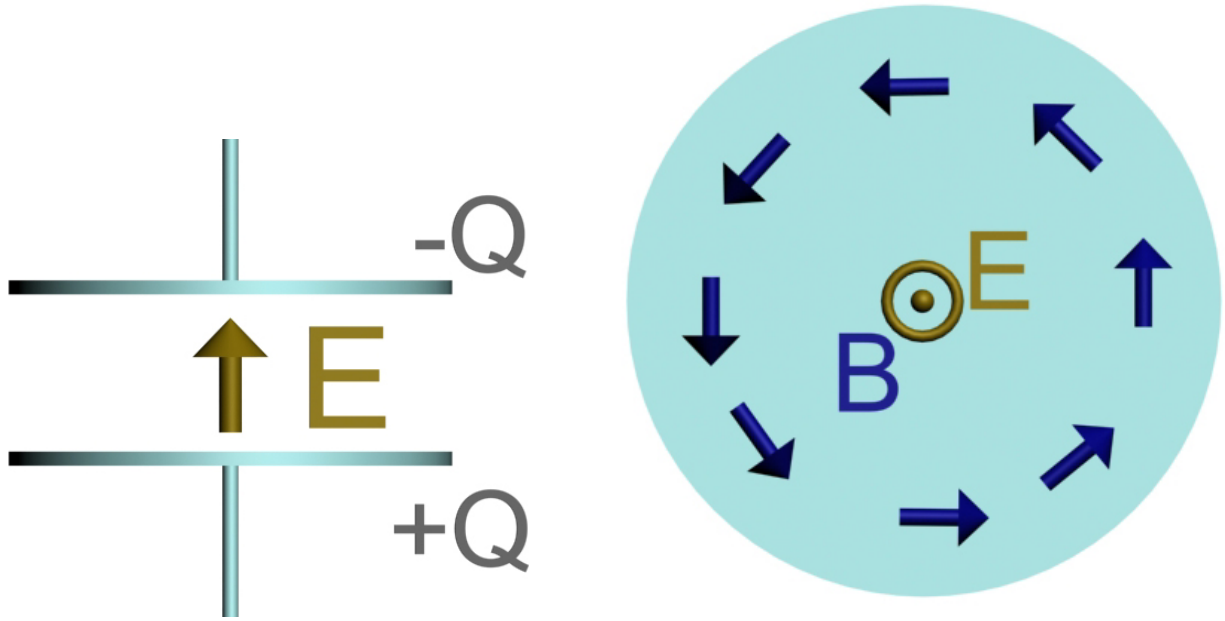
The graph shows a plot of the function y = cos(*k x*). The value of *k* is

1. **1/2**
2. **1/4**
3. **π**
4. **π /2**
5. **Don’t have a clue**



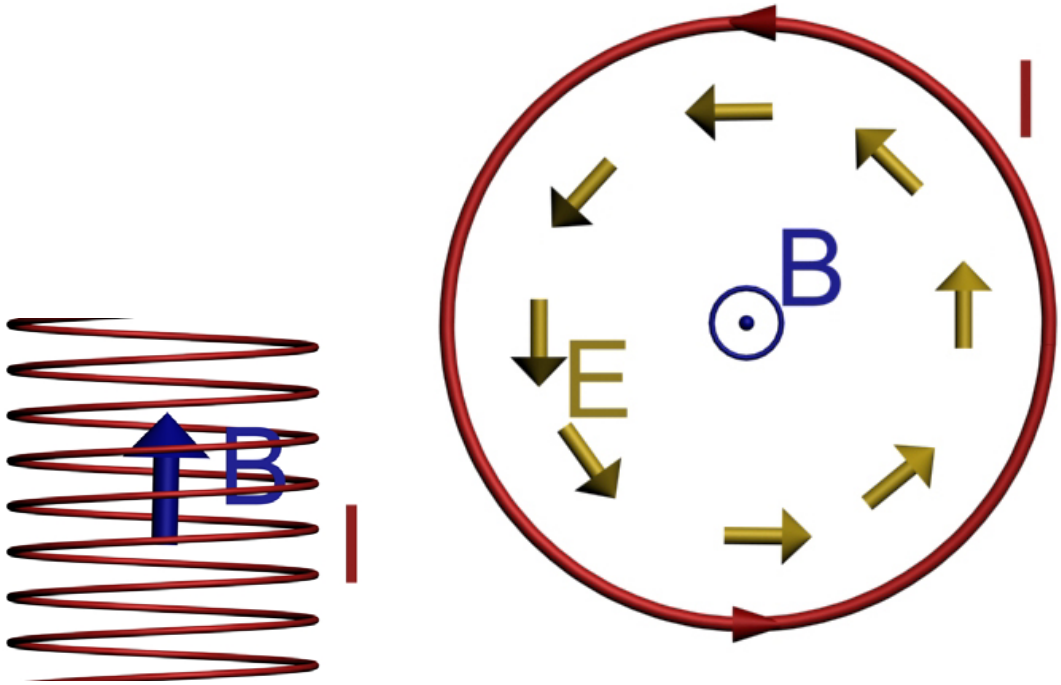
The graph shows the E (yellow) and B (blue) fields of a plane wave. This wave is propagating in the

1. **+x direction**
2. **–x direction**
3. **+z direction**
4. **–z direction**
5. **Don’t have a clue**



The plot above shows a side and a top view of a capacitor with charge *Q* with electric and magnetic fields E and B at time *t*. The charge *Q* is:

5. **Increasing in time**
6. **Constant in time.**
7. **Decreasing in time.**
8. **Don’t have a clue.**



The plot above shows a side and a top view of a solenoid carrying current *I* with electric and magnetic fields E and B at time *t*. In the solenoid, the current I is:

1. **Increasing in time**
2. **Constant in time.**
3. **Decreasing in time.**
4. **Don’t have a clue.**