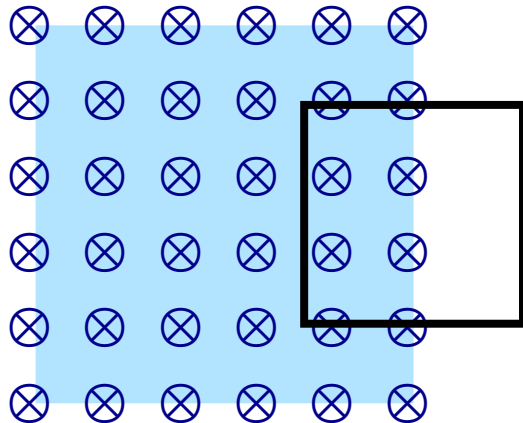# Question 1

A loop is stationary in a region of uniform magnetic field. The magnetic field increases as time passes.
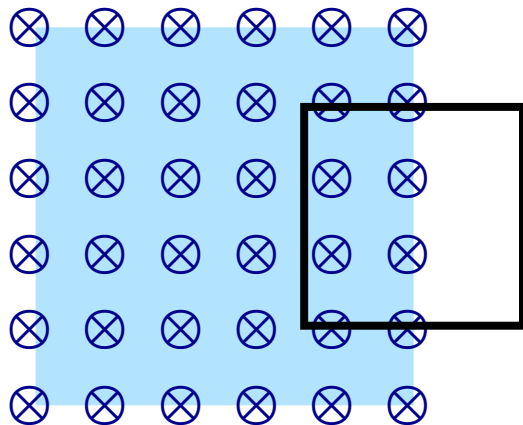

At the instant depicted in the illustration the current in the loop is:

1. Counter-clockwise

2. Clockwise

3. Zero

4. None of the above/not enough info.

Question 2

A loop is stationary in a region of uniform magnetic field. The magnetic field increases as time passes.

At the instant depicted in the illustration the force exerted by the magnetic field on the loop is:

1. $\vec{F} = 0$.

2. $\vec{F} \neq 0$ in direction $\rightarrow$.

3. $\vec{F} \neq 0$ in direction $\leftarrow$.

4. $\vec{F} \neq 0$ in direction out of screen.

5. $\vec{F} \neq 0$ in direction into screen.

Question 3

A loop is placed in an external magnetic field. The flux through the loop as time passes is plotted below.
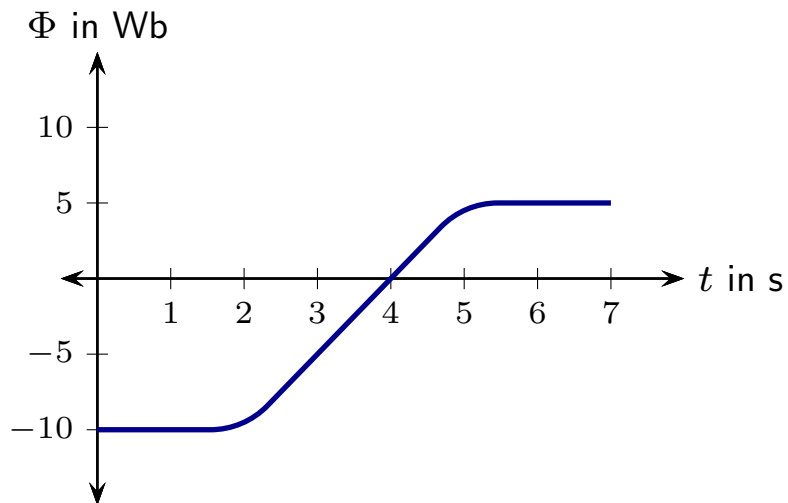
Which of the following is true regarding the magnitude of the induced EMF, $\mathcal{E}$?

1. $\mathcal{E}$ is largest from $0\,\text{s}$ to $2\,\text{s}$.

2. $\mathcal{E}$ is largest just after $2\,\text{s}$.

3. $\mathcal{E}$ is largest between $2\,\text{s}$ to $5\,\text{s}$.

4. $\mathcal{E}$ is largest just before $5\,\text{s}$.

5. $\mathcal{E}$ is largest from $5\,\text{s}$ to $7\,\text{s}$.