

Solutions

Each answer shows the steps, then the **result**.

2.1

- $dq = \lambda dl$

2.2

- C m^{-2}

2.3

- it approaches the field of a point charge

3.1 C

3.2 B

3.3

(a)

- $E = 0$ (the contributions cancel by symmetry)

(b)

- $E \rightarrow \frac{kQ}{x^2}$ — far away the ring looks like a point charge Q