PHYSICS - ELECTROSTATICS

Gauss's law states that the electric field strength (E) in the vicinity of an object can be calculated using the formula: $E = \frac{\rho}{\varepsilon_0}$ where ρ represents the charge density and ε_0 represents the permittivity of free space. Which of the following statements is true?

Choose one:

- Gauss's law applies only to spherical objects.
- Gauss's law applies only to objects with a uniform charge density.
- Gauss's law applies only to objects with a non-uniform charge density.
- Gauss's law applies to all objects.

PHYSICS - ELECTROSTATICS

Which of the following statements about Coulomb's law are correct?

Choose one:

- Coulomb's law states that the force between two charges is proportional to the product of their charges and inversely proportional to the square of the distance between them.
- Coulomb's law states that the force between two charges is proportional to the product of their charges and inversely proportional to the distance between them.
- Coulomb's law states that the force between two charges is proportional to the product of their charges and inversely proportional to the cube of the distance between them.
- Coulomb's law states that the force between two charges is proportional to the product of their charges and inversely proportional to the square root of the distance between them.

PHYSICS - ELECTROSTATICS

Which of the following statements about Coulomb's law are true?

Choose one:

- Coulomb's law states that the force between two charges is proportional to their product and inversely proportional to the square of the distance between them.
- Coulomb's law states that the force between two charges is proportional to their product and inversely proportional to the distance between them.
- Coulomb's law states that the force between two charges is proportional to their product and inversely proportional to the cube of the distance between them.
- Coulomb's law states that the force between two charges is proportional to their product