Answer on Question #55891, Physics / Electromagnetism

Which of the following is not true about the electric field intensity $\vec{E}$ of a uniformly charged solid sphere?

$\vec{E}$ is maximum at the surface of the sphere

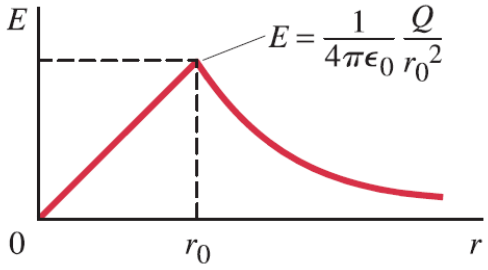
$\vec{E}$ is directly proportional to the distance from centre of the sphere

$\vec{E}$ decreases as a square of the distance from the surface of the sphere

$\vec{E}$ decreases as a square of the distance from the centre of the sphere

Solution:

FIGURE Magnitude of the electric field as a function of the distance r from the center of a uniformly charged solid sphere.



Answer: $\vec{E}$ decreases as a square of the distance from the centre of the sphere