4. A spherically symmetric charge distribution of total charge \( q \) can be described by the relation:

\[
\rho(\text{charge density}) = \frac{A}{r^2}
\]

for \( R_1 < r < R_2 \).

\( \rho = 0 \) everywhere else.

(a) Find the value of the constant \( A \).

(b) Find the value of the electric field at any value of \( r \) between \( R_1 \) and \( R_2 \).