
Consider a spherical body of uniform density with radius R . Which of the following statements regarding its gravitational field is NOT correct?

- The field vanishes at the center.
- The field vanishes at all radii $r < R$.
- The field strength increases linearly with r at $r < R$.
- The field strength decreases as $1/r^2$ at $r > R$.
- The field is always directed towards the center.