



Express the gravitational acceleration at an altitude $h = R$, where R is the radius of the earth, in terms of the gravitational acceleration at the surface of the earth, g .

A) $g_{(r=2R)} = g$.

B) $g_{(r=2R)} = \frac{g}{2}$.

C) $g_{(r=2R)} = \frac{g}{3}$.

D) $g_{(r=2R)} = \frac{g}{4}$.

$$g = \frac{G M}{r^2},$$

$$g(r = 2R) = \frac{G M}{(2R)^2} = \frac{g}{4}.$$

Answer **D**

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