mass, weight, $M$, will be altered by an amount

$e)$ The weight is

$d) \quad \frac{c}{g} + \frac{M R e m^2}{g}$

$C) \quad \frac{-M R e m^2}{g}$

$b) \quad \frac{M R e m^2}{g}$

$a) \quad \frac{M R e m^2}{g}$

A mass, $M$, sets on a scale located on the equator in

Ecuador. Because of the rotation of the earth, the
scale is at rest in an accelerated frame, and the

weight is

$e) \quad 0$
(a) What would the effect be at the north pole?

and \( g = \frac{10}{7} \text{ m/s}^2 \) so the effect is small, \( (1/3)^\% \).

\[
(6.4 \times 10^6 \text{m}) \times (27/24 \times 60 \times 60)^2 = 3.38 \times 10^{-2} \text{ m/s}^2
\]

In magnitude, \( \text{MR}^2 \) = \( 3.4 \times 10^{-3} \) \( \text{mg} \), since \( \text{MG} \), since

- the amount \( AV = - \text{MR}^2 \).

the scale exerts to keep the mass, \( M \), at rest (by which means upward at the equator). Thus, this

which means upward at the equator. Thus, this

- and is directed outward from the axis of rotation, \( \text{MR}^2 \),

rotating frame is \( F_{\text{pseudo}} = \text{MR}^2 \),

The pseudo-force acting on an object at rest in a

decreases slightly, as follows, changes by an amount, \( -\text{MR}^2 \), i.e., it

The correct answer is (a): the weight.

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