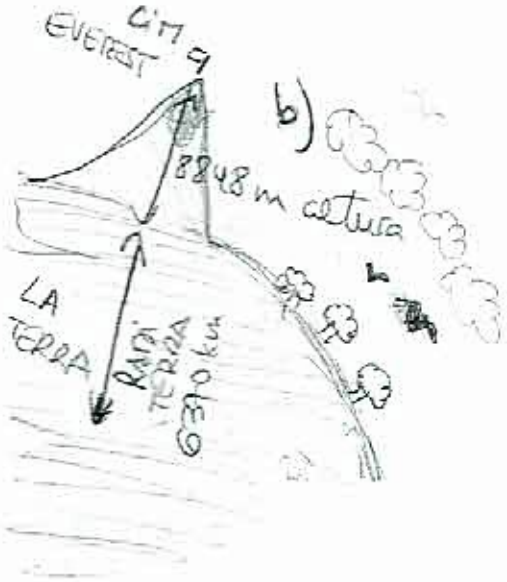
ex. 18

a) $m = 60\,kg$

$peso = m \cdot g = 60\,kg \cdot 9'8\,m/s^2 = 588\,N$



b)

$$F = G \cdot \frac{Mm}{R^2} = 6'67\,10^{-11} \cdot \frac{5'98.10^{24} \cdot 60}{\left[(8848 + 6370).10^3\right]^2} =$$

$$F = 588'16\,N.$$

c)

$$F = G\,\frac{M \cdot m}{R^2} = 6'67\,10^{-11}\,\frac{Nm^2}{kg^2} \cdot \frac{5'98.10^{24}\,kg \cdot 60\,kg}{\left[(6370 + 3000).10^3\right]^2\,m^2} =$$

$$F = 272'59\,N$$

d) $g_{Luna} = \frac{g_{Tierra}}{6}$

$$P = m \cdot g_{luna} = 60\,kg \cdot \frac{9'8}{6}\,m/s^2 = 388\,N$$