

Sin Nombre.

10

Energía E $[kg \frac{m^2}{s^2}]$

Densidad ρ $[kg/m^3]$

tiempo T $[s]$

Radio R $[m]$

$$E = E(\rho, T, R) \rightarrow E \propto \rho^a T^b R^c$$

$$\text{Energía } E \left[kg \frac{m^2}{s^2} \right] \rightarrow E = \left[m \frac{L^2}{T^2} \right]$$

* Fíjate en
 $E \propto \rho^a T^b R^c$

$$\text{Densidad } \rho [kg/m^3] \rightarrow \rho = [M/L^3]$$

$$\text{tiempo } T [s] \rightarrow T = [T]$$

$$\text{Radio } R [m] \rightarrow R = [L]$$

$$m \frac{L^2}{T^2} = [M/L^3]^a \cdot [T]^b \cdot [L]^c$$

$$m \frac{L^2}{T^2} = [M \cdot L^{-3}]^a \cdot [T]^b \cdot [L]^c$$

$$M \frac{L^2}{T^2} = M^a \cdot L^{-3a} \cdot T^b \cdot L^c$$

$$M \frac{L^2}{T^2} = M^a \cdot L^{-3a+c} \cdot T^b$$

$$E \propto \rho^a T^b R^c$$

$$E(\rho^1, T^{-2}, R^5)$$

$$M^1 = M^a$$

$$1 = a$$

$$L^2 = L^{-3a+c}$$

$$c = 5$$

$$T^{-2} = T^b$$

$$b = -2$$