

Planteamiento problema de Taylor

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302

Datos:

- Energía: $Kg (M^2/s^2)$
- Densidad: $\frac{Kg}{m^3}$

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- Radio: M
- Tiempo: S

$$\text{Energía} = \text{Densidad}^a \cdot \text{radio}^b \cdot \text{tiempo}^c$$

$$Kg \cdot m^2 \cdot s^{-2} = \left(\frac{Kg}{m^3} \right)^a \cdot m^b \cdot s^c$$

$$Kg \cdot m^2 \cdot s^{-2} = Kg^a \cdot m^{-3a} \cdot m^b \cdot s^c$$

$$\underbrace{Kg}_{\boxed{1}} \cdot \underbrace{m^2}_{\boxed{2}} \cdot \underbrace{s^{-2}}_{\boxed{-2}} = \underbrace{Kg^a}_{\boxed{a}} \cdot \underbrace{m^{-3a+b}}_{\boxed{-3a+b}} \cdot \underbrace{s^c}_{\boxed{c}}$$

$$Kg^1 = Kg^a$$

$$\boxed{a = 1}$$

$$m^2 = m^{-3a+b}$$

$$m^2 = m^{(-3 \times 1) + b}$$

$$m^2 = m^{-3+b}$$

$$2 = (-3) + b$$

$$\boxed{b = 5}$$

$$s^{-2} = s^c$$

$$\boxed{c = -2}$$