

Additional Captains' Fight 3

FPT 2018
9-10th February



1 Question

2 Solution

You have 30 seconds to solve the following question:

What would be the mass of a basketball ball with the density of the center of the Sun ?

1 Question

2 Solution

One more slide for the solution !

- Radius of the ball: $R \simeq 12 \text{ cm}$.
- Density at the center of the Sun: $\rho \simeq 150\,000 \text{ kg.m}^{-3}$.

$$\Rightarrow M \simeq \underbrace{\frac{4}{3}\pi(12 \cdot 10^{-2})^3}_{\text{volume of the ball}} \times \underbrace{150\,000}_{\text{density}} \simeq 10^3 \text{ kg}$$