Challenge 1: Build a Physics Utility Class

Create a class named Physics that encapsulates common physics calculations. This challenge is designed to be approachable even if you're not a physics expert—the necessary formulas are provided below!

Tasks:

1. **Create a class called Physics.**
2. **Implement the Following Methods:**
    - **gravitational_force(m1, m2, r)**
        - **Description: Calculates the gravitational force between two masses.**
        - **Formula:** $$F = G \times \frac{m1 \times m2}{r^2}$$
        - **Constants: Use $G = 6.67430 \times 10^{-11}\ N \cdot m^2/kg^2$.**
        - **Parameters:**
            - **m1: mass of the first object (in kg)**
            - **m2: mass of the second object (in kg)**
            - **r: distance between the centers of the two masses (in meters)**
        - **Return: The gravitational force F in Newtons.**
    - **kinetic_energy(m, v)**
        - **Description: Calculates the kinetic energy of an object.**
        - **Formula:** $$KE = \frac{1}{2} \times m \times v^2$$
        - **Parameters:**
            - **m: mass of the object (in kg)**
            - **v: velocity of the object (in m/s)**
        - **Return: The kinetic energy KE in Joules.**

- **potential_energy(m, h)**
  - **Description: Calculates the gravitational potential energy near the Earth's surface.**
  - **Formula:** $PE = m \times g \times h$
  - **Constants: Use** $g = 9.81\ m/s^2$**.**
  - **Parameters:**
    - **m: mass of the object (in kg)**
    - **h: height above the ground (in meters)**
  - **Return: The potential energy** PE **in Joules.**

Helpful Resources:

- **Gravitational Force: Wikipedia - Law of Universal Gravitation**
- **Kinetic Energy: Wikipedia - Kinetic Energy**
- **Potential Energy: Wikipedia - Gravitational Potential Energy**
- **earth_mass = 5.972e24 kg**
- **moon_mass = 7.348e22 kg**
- **distance = 3.84e8 meters**

Output Format:

Gravitational Force between Earth and Moon: X N

Kinetic Energy of a 5 kg object moving at 10 m/s: Y J

Potential Energy of a 5 kg object at 10 m height: Z J

Feel free to add additional methods if you have extra time, but the above three are required. Good luck, and remember: the provided formulas are here to help, so don't worry if you're not a physics expert!