$$F_g = G\frac{m_1 m_2}{d^2} \qquad (G = 6.7 \times 10^{-11} \ \frac{N \cdot m^2}{kg^2})$$

1. What is the most important thing that Newton discovered about gravity?

2. What are the two masses and one distance that determine your weight?

3. What would be the difference in your weight if you were 5 times farther from the center of the earth than you are now? _____
    10 times? _____

4. What does the very small value for "G" (6.7 x 10⁻¹¹) tell us about gravitational forces?

5. Calculate the force of gravity between two objects of masses 1300 kg and 7800 kg, which are 0.23 m apart.

6. What is the distance of separation between objects of masses 5.6×10^5 kg and 8.8×10^6 kg if the force of gravity between them is 440 N?