

Manipulating the Law of Gravity

1. I quadruple both masses. How much does the force of gravity change between the two masses?
2. My force is 150 N. If I increase one mass by 5 and decrease one by 2, what is the new force?
3. My force is 200 N. If I increase the distance between by 2, what is the new force?
4. My force is 200 N. If I decrease the distance between by 2, what is the new force?
5. My gravitational force changes by 9. What are the three ways I can change my mass/distance to give me this change?
6. My force is 2000 N. I decrease the distance by 3 and triple both masses. What is the new force?
7. I double one mass and increase the other by a factor of 6. How much does the force of gravity change between the two masses?
8. I increase the radius by a factor of 4. How much does the force of gravity change as a result?
9. I increase one mass by a factor of 3, the other increases by a factor of 8, and increase the radius by a factor of 3. What is the new force of gravity?
10. I decrease one mass by a factor of 2, the other decreases by a factor of 4, and increase the radius by a factor of 6. What is the new force of gravity?
11. My gravitational force changes by 12. What are the three ways I can change my mass/distance to give me this change?
12. My force is 75 N. I increase one mass by 4 and decrease the radius by 2. What is the new force?
13. The force of gravity on me is 50 N. If I double my distance from the Earth, what is the new force?