

Gravity Problems

Name: \_\_\_\_\_

1. Calculate the radius of a 365 kg. Satellite orbiting the Earth with a velocity of 5545 m/s.
  
  
  
  
  
  
  
  
  
  
2. Calculate the weight of an astronaut 1750 km above the Earth's surface.
  
  
  
  
  
  
  
  
  
  
3. What is the period of a satellite that is orbiting the Earth at 6325 m/s?
  
  
  
  
  
  
  
  
  
  
4. Calculate the force of attraction between two masses, one of 3 kg and the other with a mass of 5 kg if they are .225 m apart.
  
  
  
  
  
  
  
  
  
  
5. A satellite orbits the Earth once every 36 hours. Calculate its velocity and acceleration.
  
  
  
  
  
  
  
  
  
  
6. How far above the Earth's surface must a satellite orbit in order for its acceleration to be one fifth that of the acceleration on the surface?