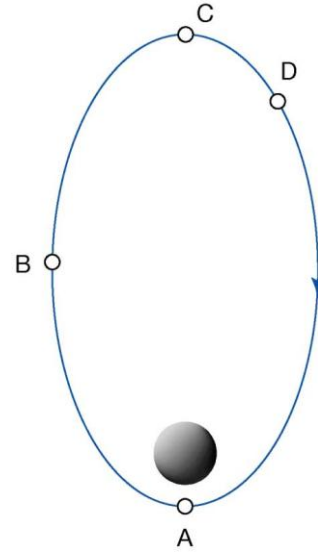

Gravity

1. Rank the positions A, B, C, and D in *descending* order of:

- Gravitational force.
- Acceleration.
- Speed.
- Kinetic energy.
- Gravitational potential energy.
- Total energy ($K + U$).
- Angular momentum.



2. Occasionally you will hear it argued that the gravitational influence of the planets at the time of one's birth has an influence on the life, fortune, and personality of that person. Compute the ratio of the gravitational force of the planet Mars to the gravitational force of a doctor in the delivery room. The mass of Mars is 6.4×10^{23} kg and it has a mean distance from Earth of 2×10^{11} m. Estimate any other values you need to solve the problem.