How does the gravitational acceleration changes outside the Earth as a function of distance to the center of the Earth (r>rE)?

A	A $g \sim r$	0
B	B $g \sim 1/r$	0
C	C $g \sim \sqrt{r}$	0
D	D $g \sim 1/r^2$	0 ✓

What is the gravitational acceleration at the altitude of the ISS (~400 km)? (In m/s2)

A	0	0
B	8.7	0 ✓
C	9.8	0
D	1.4	0

What is the escape velocity?

A	The velocity at distance r from the centre of mass needed to reach infinity at zero speed	0 ✓
B	The minimum velocity of a rocket to reach orbit	0
C	C $V_{esc} = \sqrt{\frac{2\mu}{r}}$	0 ✓
D	the velocity needed to reach the Sun	0
E	E $\sqrt{\frac{\mu}{r}}$	0

What is the circular velocity?

A	The velocity at distance r from the centre of mass needed to reach infinity at zero speed	0
B	The minimum velocity of a rocket to reach orbit	0
C	D $\sqrt{\frac{\mu}{r}}$	0 ✓
D	The velocity needed to orbit a massive object	0 ✓

What is the typical velocity and orbital period in LEO?

A	7.5 m/s | 60 min	0
B	7.7 km/s | 90 min	0 ✓
C	7.7 km/h | 90 s	0
D	9.0 km/s | 77 min	0

A sidereal day is...

A	the same as the solar day	0
B	is the time for a full rotation with respect to the stars	0 ✓
C	is the time for a full rotation with respect to the Sun	0
D	is 4 min longer than the mean solar day	0

The gravitational force depends on...

A	$F \sim r$	0
B	$F \sim 1/r$	0
C	$F \sim 1/r^2$	0 ✓
D	$F \sim 1/r^3$	0

Kepler’s 1st law says...

A	The orbits are conics and the massive object is at one of the foci	0 ✓
B	a satellite cannot escape the gravitational well of an object	0
C	the orbital period does not depend on the mass of the massive object	0

Kepler 2nd law says...

A	the gravitational force depends on the distance	0
B	two equal areas of an orbit are swept in equal time	0 ✓
C	the rate of change of the true anomaly is always constant	0

Kepler 3rd law says...

A	A $T = 2\pi\sqrt{\frac{a^3}{\mu}}$	0 ✓
B	the gravitational force depends on the distance	0
C	the orbital period does not depend on the mass of the massive object	0

Which text about the specific energy is wrong?

A	$\varepsilon = -\frac{\mu}{2a}$	0
B	the energy is <0 for bounded orbits	0
C	The energy is positive for elliptical orbits	0 ✓
D	the energy only depends on the semi-major axis	0