What is the condition for a Sun-synchronous orbit?

A	A nodal regression of 2°/d	0	✗
B	Alt ~ 36 000 km	0	✗
C	A nodal progression of 0.986°/d	0	✓
D	An inclination of < 90°	0	✗

As orbital altitude increases, how does the orbital period T and the orbital velocity v behave?

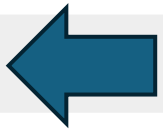
A	T is independant of the altitude	0	✗
B	T decreases	0	✗
C	T increases	0	✓
D	v is independant of the altitude	0	✗
E	v decreases	0	✓
F	v increases	0	✗

How are the burns in a Hohman transfer?

A	the 1st prograde, the 2nd retrograde	0	✗
B	both in the same direction	0	✓
C	both always prograde	0	✗
D	both radial	0	✗

If I conduct a small dv = 0.1 m/s (retrograde), how will be my final orbit?

A	circular, 0.35 km lower	0
B	elliptical, with an apogee 0.35 km higher	0
C	elliptical, with a perigee 0.35 km lower	0
D	elliptical, with a perigee 3.5 km lower	0



What is the correct equation of a plane change manoeuvre?

A $\Delta v = 2v\sin\left(\frac{\alpha}{2}\right)$. 0 ✓

B $\Delta r \approx 3.5\Delta v$. 0 ✗

C $\Delta v_1 = \sqrt{\frac{2\mu r_2}{r_1(r_1+r_2)}} - \sqrt{\frac{\mu}{r_1}}$. 0 ✗

D $v = \sqrt{\frac{2\mu}{r} - \frac{\mu}{a}}$. 0 ✗

When should a plane change manoeuvre be done to minimise effects on other parameters and use as little dv as possible?

A	At perigee, when the change in kinetic energy is the greatest	0	✗
B	At apogee, when the velocity is smallest	0	✓
C	At the nodal crossing	0	✓
D	At the highest angle from the equator possible	0	✗

A posigrade burn ...

A	decreases altitude 180° from the burn point	0	✗
B	shifts the semi-major axis by 180°	0	✗
C	increases altitude 180° from the burn point	0	✓
D	changes the inclination of the orbit	0	✗

I want to change the semi-major axis of the orbit, the RAAN and the inclination. What should I solve?

A	A Hohmann tranfert	0	✗
B	A plane change manoeuvre	0	✗
C	A one-tangent burn manoeuvre	0	✗
D	Lambert's problem	0	✓

At 400 km altitude, what is the size of the Earth out of the ISS' window (i.e. the cupola)?

A	140°	0	✓
B	17°	0	✗
C	2°	0	✗
D	70°	0	✗

What does orbit determination (OD) mean?

A	Finding a description of the orbit	0	✓
B	Solving for dv	0	✗
C	Designing the orbit pre-flight	0	✗
D	The process of converting a TLE to a state vector	0	✗