

USEFUL RESOURCES

The updates, homework assignments, and useful links for APC can be found on SchoolNova's web page:

https://schoolnova.org/classinfo?class_id=2252&sem_id=74

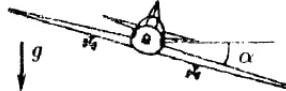
The practical information about the club and contacts can be found on the same web page.

TODAY'S MEETING

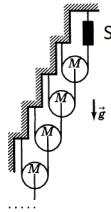
Today we finish with Newton's laws.

NEW HOMEWORK

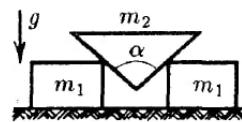
1. F=ma 2010 exam B, problems 9, 10 https://www.aapt.org/physicsteam/2010/upload/2010_Fma.pdf
2. The air drag force acting on rain droplets depends on the speed of the droplet, its radius and the density of the air. Using dimensional analysis reconstruct the expression for the drag force up to a dimensionless constant factor. Assuming this factor to be 1 estimate the speed that a droplet of radius 1 mm will have near the ground after falling from a great height. Density of air is 1.3 kg/m^3 .
3. An airplane makes a turn in the air. It moves horizontally along a circle of radius R with a constant speed v . Find the angle its' wings make with the horizon.



4. A half-infinite system is made out of massless ropes and similar pulleys each of mass M . Find what force is displayed by a spring scale S .



5. A wedge of mass m_2 with an opening angle α is inserted between two smooth blocks of mass m_1 each. Find acceleration of all objects in the system.


FOR THE NEXT MEETING

IMPORTANT: The next club's meeting is at 3pm, online via Zoom, on Sunday, **December 14**.