

USEFUL RESOURCES

The updates, homework assignments, and useful links for APC can be found on SchoolNova's web page:
https://schoolnova.org/nova/classinfo?class_id=adv_phy_club&sem_id=ay2020

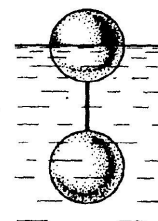
The practical information about the club and contacts can be found on the same web page.

TODAY'S MEETING

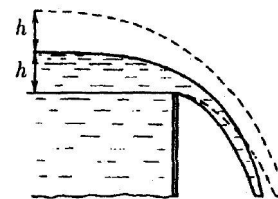
Today we finish discussing hydrostatics and hydrodynamics of an ideal fluid.

PROBLEMS

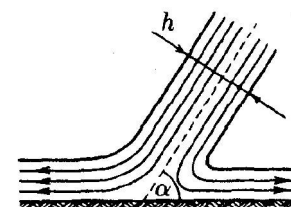
- Two balls of volume 10 cm^3 each are connected with a thread and float vertically in such a way that the upper ball is halfway submerged. The lower ball is 3 times heavier than the upper one. Find tension of the thread.



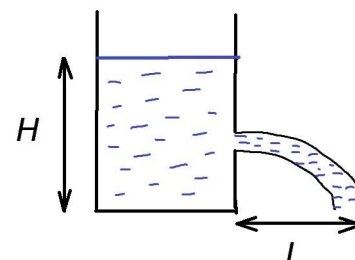
- A wide stream of water flows down a long inclined plane. Depth of the stream becomes two times smaller at a distance l down the flow. At what distance does depth become four times smaller?
- *3. Imagine a wide dam with water level being d above the edge. By how many times would the water discharge grow if the water level was $2d$ above the edge?



- A wide flow of water of thickness h encounters a plane at angle α to its direction of flow. What are the thicknesses of flows on which it decomposes?



- *5. A tank is filled with water up to height H . We want to drill a hole in a side wall of the tank in such a way that the jet of water produced will land the farthest from the tank. Where should we drill the hole? Tank sits on a horizontal plane.



FOR THE NEXT MEETING

IMPORTANT: The next club's meeting is at 3:00 pm, via Zoom, on Sunday, **October 25**.