



*A being who is three Persons while remaining one Being,
just as a cube is six squares while remaining one cube.*

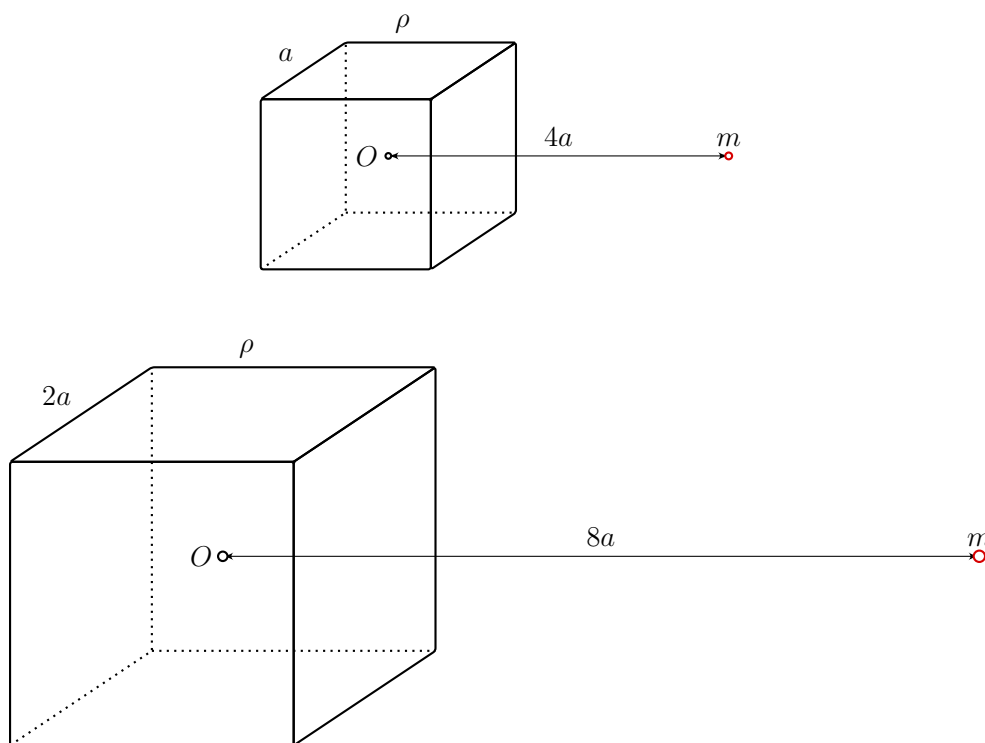
Clive Staples Lewis

Cube in a cube

At a distance of $4a$ from a solid Cube with a side a and density ρ on a line passing through its center and the center of one of its faces, a point-like cube of mass m is provided (see fig.). The initial velocities of the cubes are equal to zero. The cubes are released, and as a result, the distance between them changes twice in time t .

Find the time it takes to change the distance twice between the same small cube and a solid Cube with side $2a$ of the same material, if the small cube is located on a line passing through the center of the Cube and the center of one of its faces on a distance of $8a$ from the cube (see fig.). The initial velocities of the cubes are zero.

Note. The distance between the cubes is measured from the center of the big Cube.



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First hint — 10.05.2021 14:00 (GMT+3)

Second hint — 12.05.2021 14:00 (GMT+3)

End of the second tour — 14.05.2021 22:00 (GMT+3)