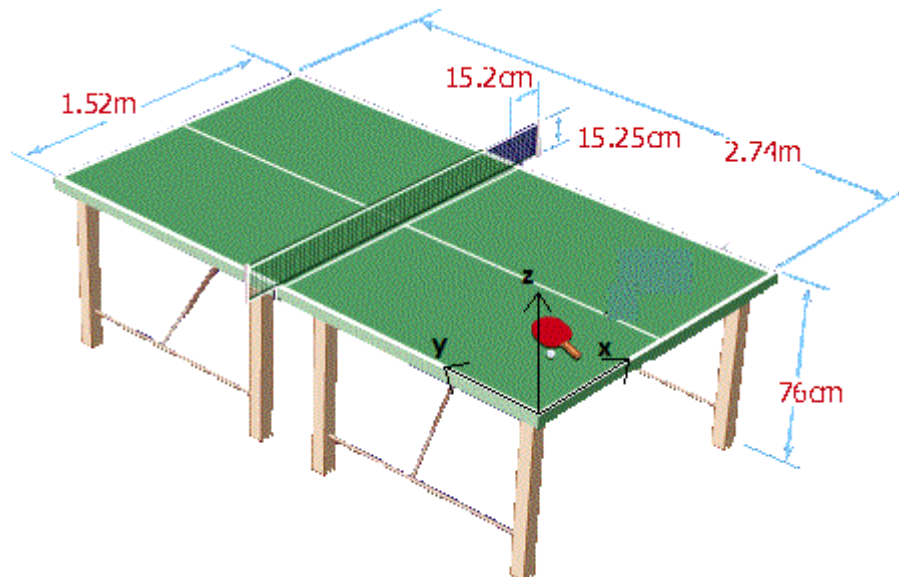


PROBLEM STATEMENT 1

FOR 1st AND 2nd YEAR PARTICIPANTS:-

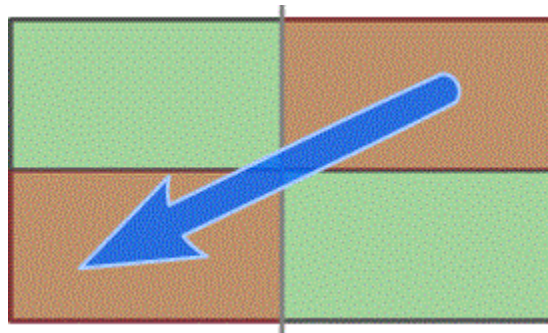
Table tennis, also known as ping - pong, is a sport in which two or four players hit a lightweight, hollow ball back and forth using table tennis rackets. The game takes place on a hard table divided by a net.

The challenge is to give a solution to whether a table tennis service is valid or not following the double service rules. Dimensions of a table tennis table are given below:-



DOUBLES SERVICE RULE:-

That service must originate from the right hand "box" in such a way that the first bounce of the serve bounces once in said right hand box and then must bounce at least once in the opponent side's right hand box (far left box for server), or the receiving pair score a point.



INPUTS:-

- Velocity of the racket
- Angle of service from horizontal plane(XY plane)
- Angle of service from vertical plane(XZ plane)
- Height at which the ball is hit from the table.
- X- coordinate at which the ball is hit.

ASSUMPTIONS:-

- Take coefficient of restitution as 0.9 between the table surface and ball.
- Elastic collision between racket and ball.
- Neglect spinning of ball.

OUTPUT:-

Whether the shot is valid or not.

Last date for submission of the solution of the problem is 18-09-2011 before 2400 hrs.

The solution must be submitted with the soft copy of the program along with the algorithm.

Mail your :-

- Team name.
- Participant's name.
- Registration number.
- College name.
- Branch.

To msft.mechrocosm2k11@gmail.com