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2D and 3D Motion Analysis

Table tennis

Time: Time that ball took to travel to other side = 0.7 seconds



Distance and speed :

The distance of the table is 2.75 m + the distance between the hand and the beginning of the table is about 1 m ($2.75+1=3.75$ m)

Using the calibration on excel with the coordinates

Distance= 235.41 cm

Speed of the ball we know the distance and the time that the ball took to travel

$2.35/0.7= 3.357$ m/s

Height:

The height of the net is 15.25

Using excel with the coordinates I got the height of the ball which equals to : 27.13 cm

Angle :

I calculated the angle of the arm and the body with 3 points

Hand

Hip

Shoulder

Angle 1: 66.45

Angle 2 : 90

Angle 3 : 18,95

