King Abdul Aziz University
Faculty of Science
Physics Department
Year: 1433/ 1434
Term: 1

Course: **281**
Report number (**4**)

(**Projectile Motion**)

Name of Experiment:
Projectile Motion

Student's Name:

Student's Number:

Lab partners' name:

Instructor's Name:
Najah Altwarqi

Objective:

- To Find The Initial Velocity Of The Projectile .

Apparatuses:

1- Ball .

2- Table .

3- Meter .

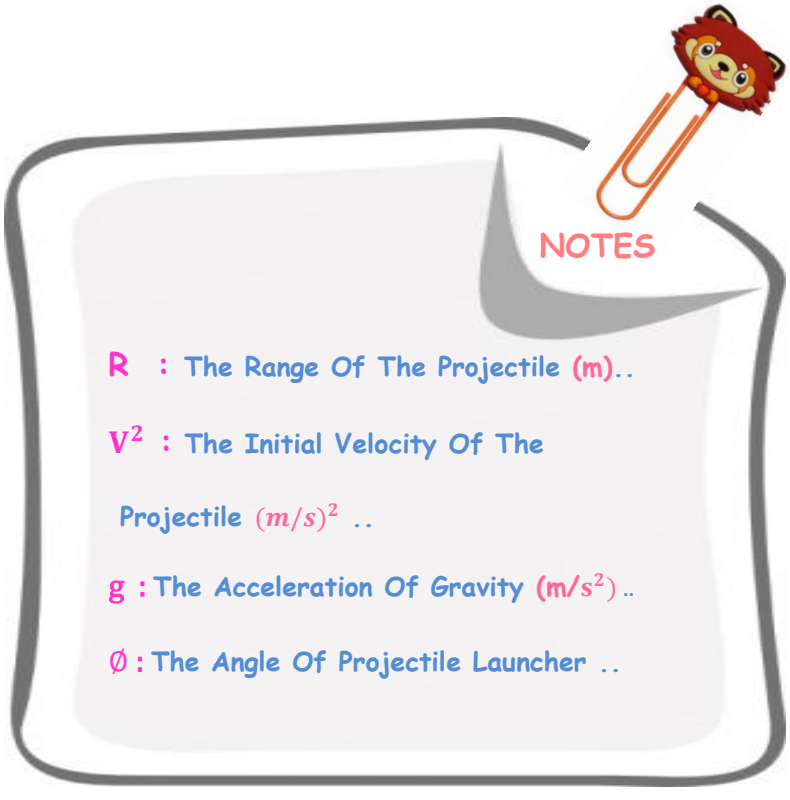
4- Projectile Launcher .

5- Carbon Paper .

Main Equations:

♣ R= $\frac{V^2}{g} \times sin2\emptyset\ m$

♣ V = $\sqrt{g \times Slope}\ \ m/s$



Data:

	Sin2∅	$R \times 10^{-2}$ (m)
20	0.64	68.3
30	0.86	86.3
40	0.98	93.8
45	1	94.9
50	0.98	92.1
60	0.86	81.7
70	0.64	61.3

Graph:

♣ The Graph :

(you can see it in the next page)

Calculations and results:

♣ Slope = $\frac{\Delta y \times 10^{-2}}{\Delta X}$ m

= $\frac{(82-61)\times 10^{-2}}{(0.86-0.64)}$ = 0.95 m

♣ V= $\sqrt{g \times Slope}$

= $\sqrt{9.8 \times 0.95} = 3.05$ m/s