

Worksheet: Motion in a Plane

ICSE · Class 11 · Physics · 5 questions · 15 marks

Name: _____

Date: _____

Score: _____ / 15

Q1. A vector has components $A_x = 3$, $A_y = 4$. Find its magnitude and direction. *[2 marks]*

Q2. What are $\hat{i}$, $\hat{j}$ and $\hat{i} \times \hat{j}$? *[2 marks]*

Q3. A projectile is fired at 50 m/s at 30 degrees to the horizontal. Find T, H, and R ($g = 10 \text{ m/s}^2$). *[5 marks]*

Q4. A stone is thrown horizontally at 20 m/s from 80 m height. Find its range ($g = 10 \text{ m/s}^2$). *[3 marks]*

Q5. A particle moves in a circle of radius 20 cm at 5 revolutions per second. Find its speed and centripetal acceleration. *[3 marks]*
