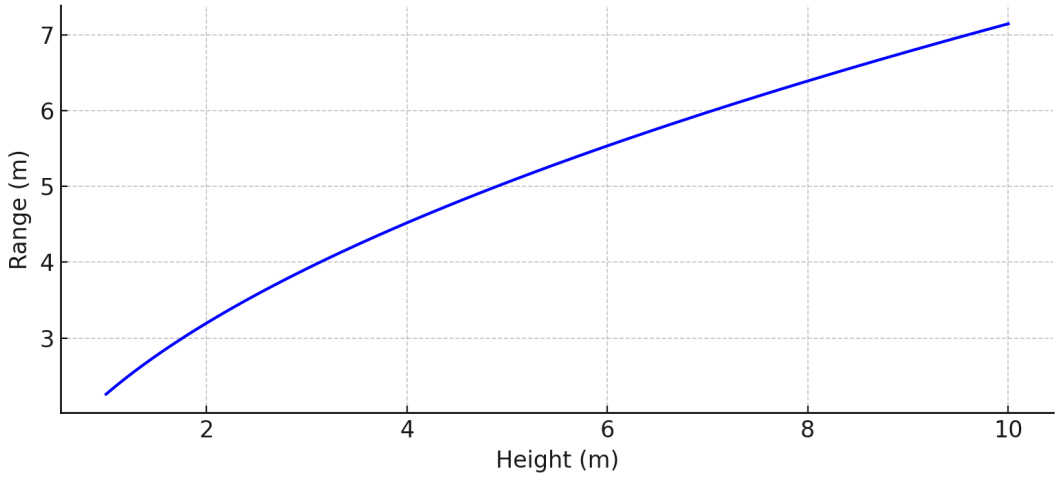
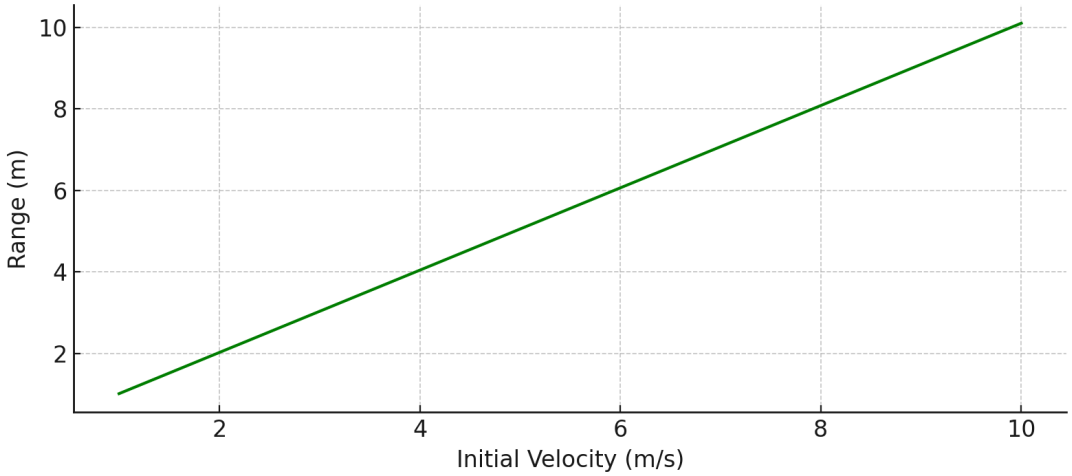
Range Graphs with Explanations

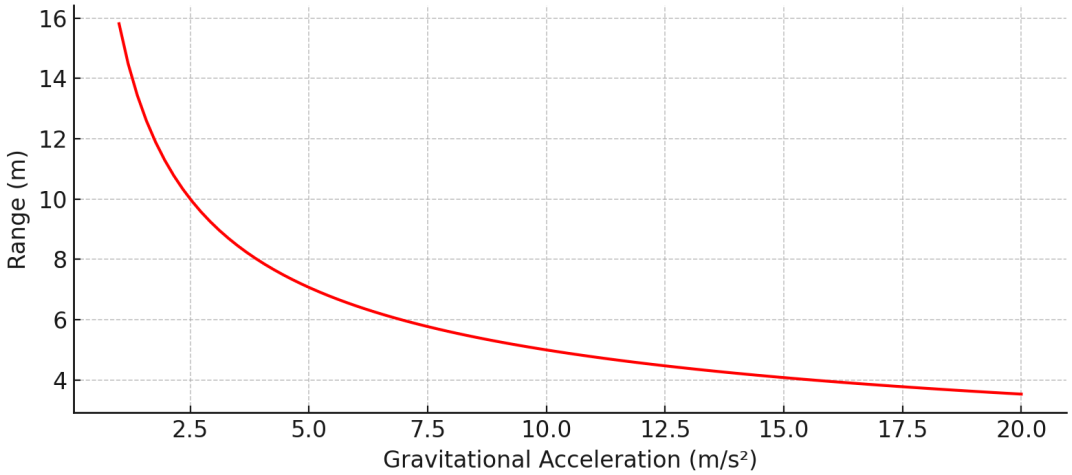
Graph 1 – Range vs. Height
(v_0 = 5 m/s, g = 9.8 m/s²)



Graph 2 – Range vs. Initial Velocity
(h = 5 m, g = 9.8 m/s²)



Graph 3 – Range vs. Gravitational Acceleration
(v_0 = 5 m/s, h = 5 m)



Graph Explanations

Graph 1 – Range vs. Height

Fixed: $v_0 = 5$ m/s, $g = 9.8$ m/s^2

Observation: As height increases, the range increases non-linearly. This is because the time of fall increases with the square root of the height.

Graph 2 – Range vs. Initial Velocity

Fixed: $h = 5$ m, $g = 9.8$ m/s^2

Observation: As initial horizontal velocity increases, the range increases linearly. This matches the relationship: Range = velocity × time.

Graph 3 – Range vs. Gravitational Acceleration

Fixed: $v_0 = 5$ m/s, $h = 5$ m

Observation: As gravitational acceleration increases, the range decreases. This is due to the inverse square root relationship between range and gravity.