

Extended response PLAN

Out of 16 $\therefore 16 \div 2 - 2 = 6$ points of information

Variables

- independent
 - angle
 - changed directly by experimenter
 - investigating the effect of changing this
- dependent
 - range
 - measured as result
 - investigating the effect on this of the change
- constant
 - launch speed (v_0)
 - found in formula $\vec{s} = \vec{v}_0 t + \frac{1}{2} \vec{a} t^2$
 - would affect range

Maximum range

- 35°
 - shown by highest point on curve
 - longest range ≈ 2.45 m
- Increasing angle past 35° decreases range
 - v_{0H} decreased
 - $s_H = v_{0H} t \therefore$ range decreased
- Decreasing angle below 35° decreases range
 - v_{0V} decreased
 - time of flight depends on v_{0V}
 - $s_H = v_{0H} t \therefore$ range decreased.