1) Derive range of projectile launched at angle θ and initial speed v_0 (assume the final height is the same as the initial height).

- Use projectile motion equations to solve for change in x

2) Derive maximum height of projectile launched at angle θ and initial speed v_0.

- Use equation for Δv^2 in terms of g and y.

3) Derive trajectory of projectile (i.e. $y(x)$)

- solve for t from x equation
- plug t into y equation and simplify