

Launch Math

Force Equilibrium: $F_{gy} - F_h = F_y$

$$S = \text{Surface area circle: } r^2 * \pi$$



$$C_d * 0.5 * \rho * v^2 * S$$

$$9.8 * m = C_d * 0.5 * \rho * v^2 * S$$

$$V = \sqrt{[(9.8 * m^2) / (C_d * S)]}$$



$$F_d = m * g$$

$$F_u = m * C_d * 0.5 * \rho * v^2 * S$$

Acceptable ground hit speed
= 20 m/s

