EHP = \frac{R_3 \cdot V_3^2}{550}

\text{ESTIMATES HORSEPOWER}
[ finish first ]

\text{THE FROUDE NUMBER}
[ how big's your wake ]

\text{FR} = \frac{V}{\sqrt{gL}}

\text{THE ARCHIMEDE'S PRINCIPLE}
[ what floats your boat ]

W = \rho \cdot V \cdot g \cdot V^2

\text{DRAG COEFFICIENT}
[ maybe resistance isn't futile ]

\text{CD} = \frac{D}{\frac{1}{2} \cdot \rho \cdot V^2 \cdot A}

\frac{\partial}{\partial t} \left( \frac{v^2}{2} \cdot p + g \cdot h \right) = 0
(1)

\text{where}

v = \text{flow speed}
\rho = \text{density}
\gamma = \text{gravity}
\text{h} = \text{height}

\frac{v^2}{2} \cdot \rho + g \cdot h = \text{Constant}
(2)

\frac{v^2}{2g} + \frac{\rho}{\gamma} \cdot h = \text{Constant}
(3)

where

\gamma = \rho \cdot g

\frac{\rho \cdot v^2}{2} + p = \text{Constant}
(4)

\frac{\rho \cdot v^2}{2} = P_d
(5)

\frac{\rho \cdot v^2}{2} + p_1 = \frac{\rho \cdot v^2}{2} + p_2 = \text{Constant}
(6)

\text{BERNOULLI EQUATION}
[ why the boat goes VROOM ]

\text{This poster presented as a service of Florida Institute of Technology, where students harness the power of math to build bridges, design rockets and develop new technologies in preparation for careers of tomorrow.}