Physics Problem Solving Sheet

Problem

Useful Description

Picture & Given Information:

X	y
$\Delta x = 300m$	$\Delta y =$
$V_x =$	$V_{iy} = 0$
	$V_{fy} =$
	$g = -9.8 m/s^2$
	$t = 3 s$

Question: how much V to hit the ship?

Target Quantiy: V_x

Physics Approach

Physics Concepts and/or Principles:

2D x is constant v
y = freefall

Specific Application of Physics

Assumptions/ Constraints:

Specific Equations:

No air resistence

$X: V_x = \frac{\Delta x}{\Delta t}$

Mathematical Procedures

Employ specific equations to solve for target quantity.

$$V_x = \frac{300\,m}{3\,s} = 100\,m/s$$

Check units & calculate