

Proposed Problem

CRP #23

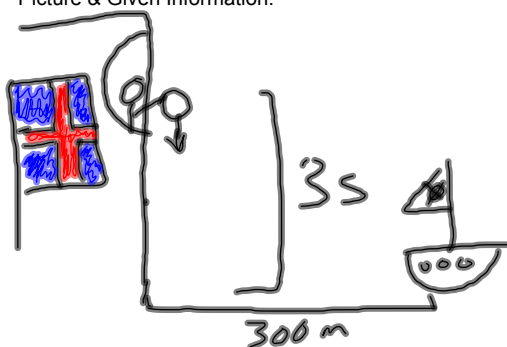
2D motion

- Create Useful description - sketch, graphs, define quantities, define problem
- Physics Approach - list physics concepts that would apply to this problem
- Specific Application of Physics - use the concepts to model mathematically model the problem
- Mathematical Procedures - use the equations to solve the problem

Aug 5-9:52 AM

Physics Problem Solving SheetUseful Description

Picture & Given Information:



Const acc.	Const vel.
Y	X
$y =$	$\Delta X = 300\text{m}$
$v_{i,y} = 0\frac{\text{m}}{\text{s}}$	$v_x = ?$
$v_{f,y} =$	
$a_y = -9.8\frac{\text{m}}{\text{s}^2}$	
$\Delta t = 3\text{s}$	

Question:

What is the muzzle velocity of the cannon ball?

Target Quantity: v_x

Jul 26-9:35 PM

Physics Problem Solving Sheet (cont.)

Physics Approach

Physics Concepts and/or Principles:

proj. Launched horiz
 $\therefore x: \text{const. vel.}$
 $y: \text{const. acc.}$

Specific Application of Physics

Assumptions/ Constraints:

ignore friction +
 air res.

Specific Equations:

$$v_x = \frac{\Delta x}{t}$$

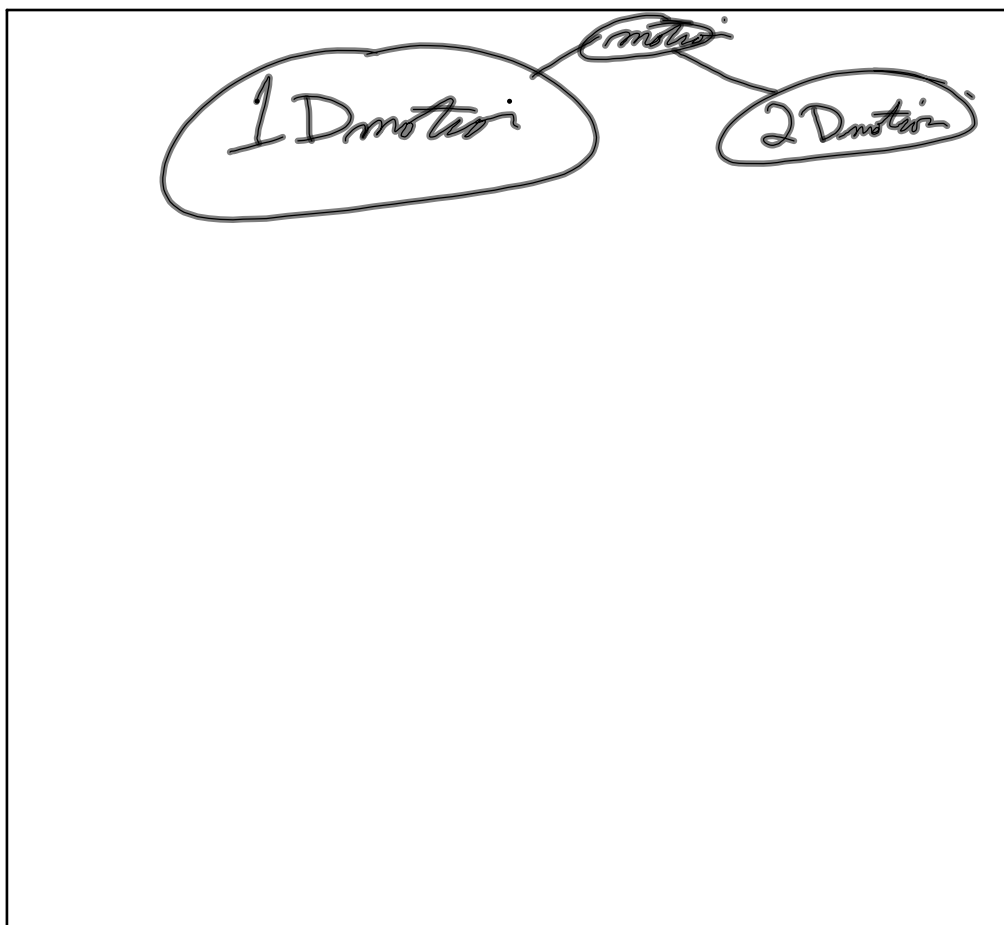
Mathematical Procedures

Employ specific equations to solve for target quantity.

$$v_x = \frac{300}{3} = 100 \text{ m/s}$$

H/W: # 24 & 25
 Maps: Motion (add 2D)
 Vector

Jul 26-9:49 PM



Dec 3-9:40 AM