

Proposed Problem

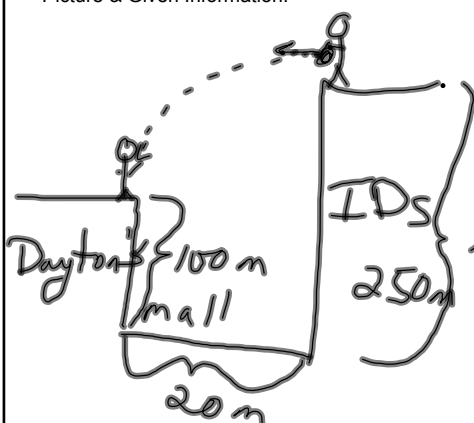
2D motion
CRP #27

- 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.
X

$\Delta y = -150 \text{ m}$
 $v_{iy} = 0 \text{ m/s}$
 $v_{fy} = ?$
 $a = -9.8$
 $\Delta t = ?$

$\Delta x = 20$
 $v_x = ?$

Question:

Target Quantity:

$$v_x = \frac{\Delta x}{\sqrt{\frac{2\Delta y}{-a}}}$$

$$= \frac{20}{\sqrt{\frac{2(-150)}{-9.8}}}$$

$$v_x = 3.6$$

Jul 26-9:35 PM

Physics Problem Solving Sheet (cont.)Physics Approach

Physics Concepts and/or Principles:

*see last slide*Specific Application of Physics

Assumptions/ Constraints:

no air res.

Specific Equations:

$$v_x = \frac{\Delta x}{\sqrt{\frac{2\Delta y}{-9.8 \frac{m}{s^2}}}}$$

Mathematical Procedures

Employ specific equations to solve for target quantity.

Jul 26-9:49 PM