

Do Now

- Get your buggy and fan cart from Wednesday.
- Make sure that it is the same one.
- Get your lab sheet from Wednesday.

Today

- Finish the buggy fan cart lab.
- Save the falling man!
- Time permitting: Begin homework review.

Buggy Fan Cart

- We can combine the initial velocities and accelerations of the buggy and fan can cart.
- How long would it take them to cover 5m as one unit?
- Solve for time.

Previous Examples

- Two people with constant V running toward each other.
- Two people with constant a running toward each other.

Determining the Meeting Point

- You now have time for the event.
- Solve for the displacement of one of the vehicles for the time duration.
- This is the meeting point.
- Let's test your theory.

Falling into a Moving Car



Katie Hansen Skydives landing into moving car Watch amazing Video Glide Into back seat

Your Mission

- You have a buggy and a meter stick.
- Determine the buggy's velocity.
- Determine the time that it will take to fall to the buggy.
- Determine where the buggy needs to be when _____ begins to fall in order to catch him on the top of the buggy.

Homework Review

- I will do the most requested homework problems as voted on by you.
- Please follow along in your notes or on a whiteboard.
- There are extra practice problems on physicsclassroom.com lesson 6-d.

1-h. What is the distance traveled by the cootie after 10 seconds? $v_i=60\text{m/s}$.

1-i. What is the displacement of the cootie after 10 seconds?

3-d. How long does it take the girl to return to the ground? $V_i=25\text{m/s}$.

3-i. What is her distance traveled after 3 seconds?

3-j. What is her displacement after 3 seconds?

4-a. What is the velocity of the balloon when it hits the pavement? $V_i = -11\text{m/s}$. $Y_i = 14\text{m}$.

4-b. How long did it take for the balloon to hit?

4-c. Velocity of the balloon when it is half way down?

4-d. He hits the volleyball captain ($X_f=2\text{m}$).
What's the velocity?