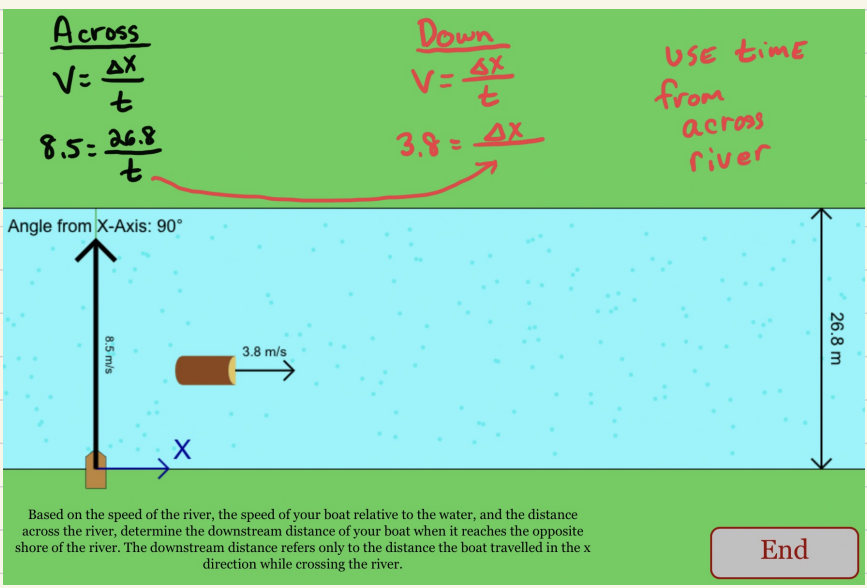
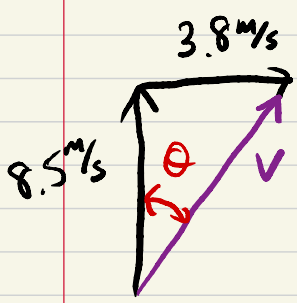
Intro to Projectiles
Self test help

River Crossing

- Do as two different Problems
- Both problems take place at a constant speed
- Use the across river time as the down river time





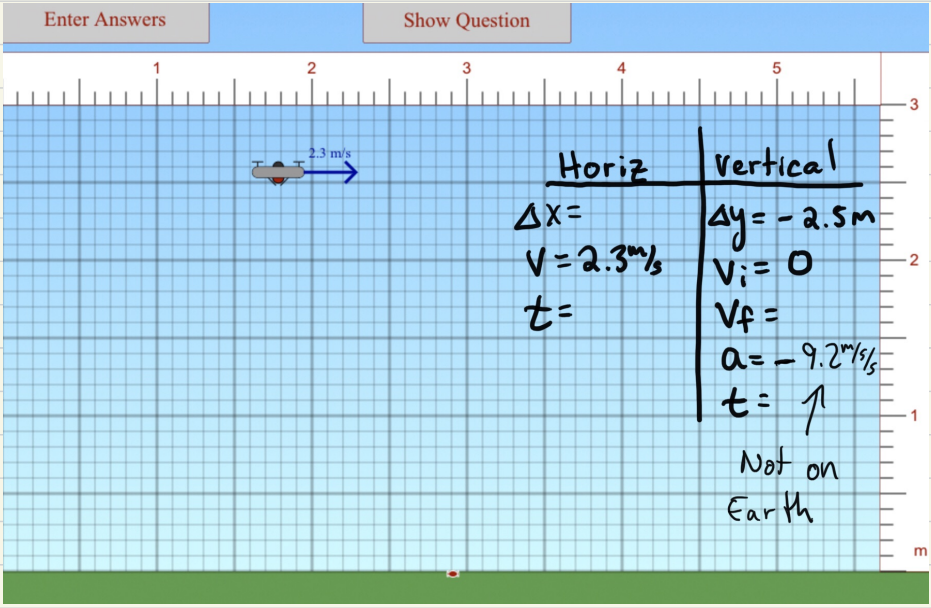
V is total speed

θ is angle for triangle

90-θ is launch angle

Drone Delivery

- Measure height to bottom of the red ball
- Ball starts moving only horizontally
- After getting Δx, count back that many meters from the target



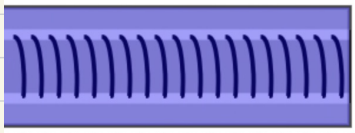
Horizontal Speed

- Click on the zoomed in launcher to fire ball
- Measure Δx to the middle of the ball's landing location
- You are solving for horizontal speed at launch

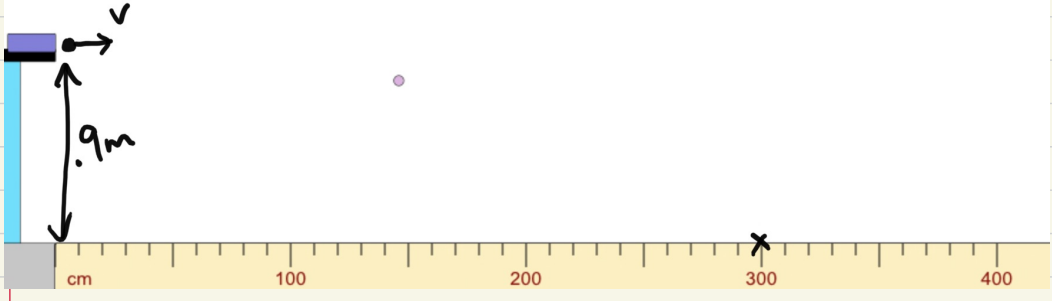
Enter Answers

Show Question

Zoomed Image Of Launcher



Horiz.	Vertical
$\Delta x = 3$ m	$\Delta y = -.9$ m
$v = ?$	$v_i = 0$ m/s
$t =$	$v_f =$
	$a = -10.2$
	$t =$



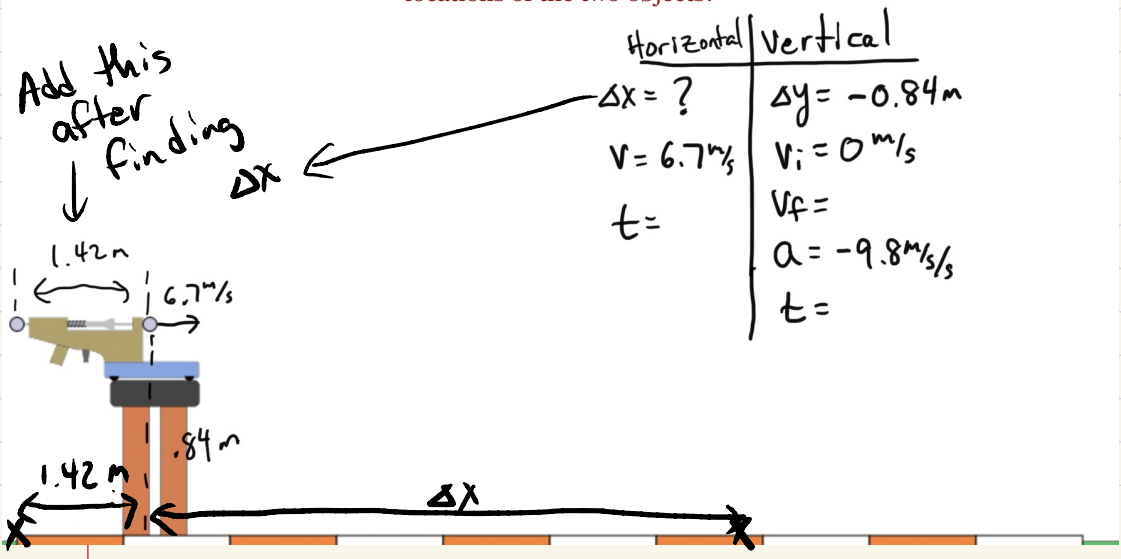
Difference in Landing Location

- Start by finding the distance traveled by the ball on the right
- Add the Δx to the original separation of the steel balls

End

After you have made your calculation, hit the end button.

The projectile launcher shown below will give the object on the right an inital horizontal speed of 6.7 m/s. While the other object will be dropped with no initial speed. The objects are initially 84 cm above the ground and separated by 142 cm. What will be the difference in the landing locations of the two objects?



Horizontal	Vertical
$\Delta x = ?$	$\Delta y = -0.84\,m$
$v = 6.7\,m/s$	$v_i = 0\,m/s$
$t =$	$v_f =$
	$a = -9.8\,m/s/s$
	$t =$