

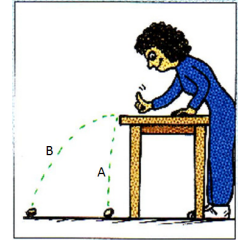
Projectile Motion: Part 2

Mr. Sudbury

Projectile vs Freefall Motion

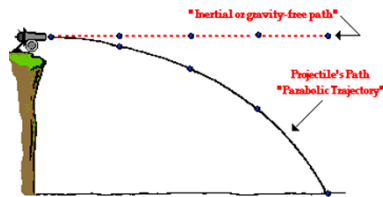
Fundamental Concept

- The time for coin A and Coin B are the same.

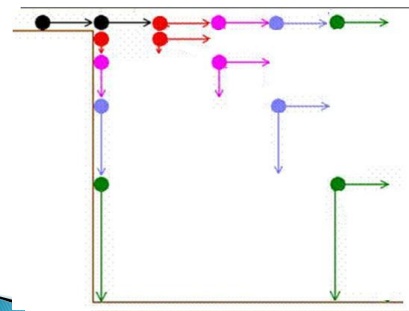


Projectiles

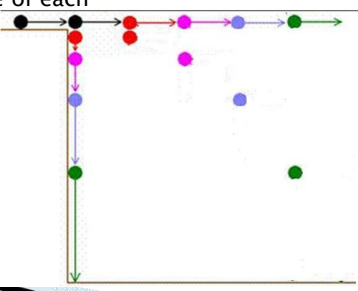
- If there was no gravity, the projectile would continue on a horizontal path infinitely.
- Gravity causes it to free-fall as it moves sideways



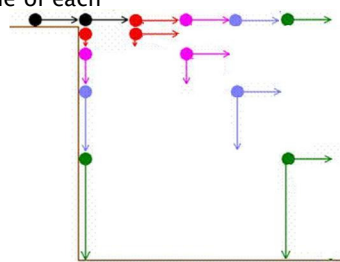
Analysis of a Projectile



- Determine the magnitude of each position.



- Determine the magnitude of each position.



Projectile Motion

The KEY to Projectiles

- ▶ G.U.E.S.S
- ▶ Time for free fall is the same as time for horizontal motion.

Projectile Practice Problems

- ▶ How high is the platform the ball was thrown from?

horizontal	v	vertical	d
	d		t
	t	v	a = 9.8 m/s ²

Projectile Practice Problems

- ▶ How far away does the ball land?

horizontal	v	vertical	d
	d		t
	t	v	a = 9.8 m/s ²

Projectile Practice Problems

- ▶ How fast is the ball thrown?

horizontal	v	vertical	d
	d		t
	t	v	a = 9.8 m/s ²

Projectile Motion Practice

- ▶ A plane with a velocity of 95 m/s drops supplies from a height of 200 meters. How far away from the target zone should the supplies be dropped to land on target?

horizontal	v	vertical	d
	d		t
	t	v	a = 9.8 m/s ²

Stop

