3 Lecture - PHY101

Important Subjective

What is projectile motion?

Answer: Projectile motion is the motion of an object that is thrown, launched, or dropped near the Earth's surface and moves along a curved path under the influence of gravity.

What are the two components of motion in projectile motion?

Answer: The two components of motion in projectile motion are the horizontal and vertical components.

What is the equation of motion for projectile motion in the x direction?

Answer: The equation of motion for projectile motion in the x direction is x = x0 + v0xt, where x is the final position, x0 is the initial position, v0x is the initial velocity in the x direction, and t is the time elapsed.

What is the equation of motion for projectile motion in the y direction?

Answer: The equation of motion for projectile motion in the y direction is y = y0 + v0yt - 1/2gt^2, where y is the final position, y0 is the initial position, v0y is the initial velocity in the y direction, g is the acceleration due to gravity, and t is the time elapsed.

What is circular motion?

Answer: Circular motion is the motion of an object along a circular path.

What is centripetal force?

Answer: Centripetal force is the force acting on an object that causes the circular motion and is directed toward the center of the circle.

What is the relationship between centripetal force, mass, velocity, and radius?

Answer: The relationship between centripetal force, mass, velocity, and radius is F = mv^2/r.

What is the period of the circular motion?

Answer: The period of circular motion is the time taken for one complete revolution around the circle.

What is the frequency of circular motion?

Answer: The frequency of circular motion is defined as the number of revolutions per unit of time.

How are period and frequency related?

Answer: Period and frequency are related by $T = 1/f$, where T is the period and f is the frequency.