

Calculating Angle of Trajectory (Assignment 12)

1. A projectile is released with a velocity of 51 feet per second. After 2 seconds, the projectile's horizontal distance from where it was released is 87 feet. What angle does the trajectory of the projectile make with the ground?
2. A projectile is released from a height of 20 feet with a velocity of 130 feet per second. If the projectile hits the ground 6.5 seconds after it is released, what is the angle of trajectory to the ground?
3. A projectile is released with a horizontal velocity of 20 feet/second. If it hits its maximum height 4 seconds after it was released, what is the angle of trajectory to the ground?
4. The initial vertical velocity of a projectile is 70 feet/second. If it was released from the ground and lands 60 feet from where it was released, what is the angle of trajectory to the ground?
5. A projectile is released from a height of 6 feet with an initial velocity of 100 feet per second. After 3 seconds, the height of the projectile is 42 feet. What angle does the trajectory of the projectile make with the ground?