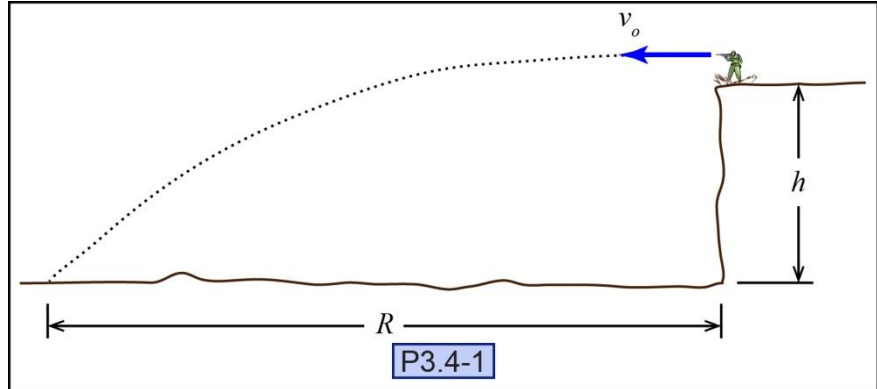


P3.4-1) A man standing on the edge of a cliff shoots a bullet from a gun. The bullet leaves the gun with an initial horizontal velocity of 750 mph. If the cliff is $h = 1000$ ft high, what is the bullet's range (R)?



Given:

Find:

Solution:

Range equation.

Write down the range equation as a function of t and v_0 .

$R =$ _____

Flight time.

Write down the height equations of the projectile in variable form. Then apply this equation at the end of flight and solve for the time of flight.

$t =$ _____

Calculate the range.

Plug the time into the range equation and solve for the range.

$R =$ _____