

40m

2s

use: $v = u + gt$

at max height $v = 0$

$-u = gt$ (g negative as it acts in opposite direction to ball motion which is upwards)

$t = -u/g = -10/-10 = 1$ second

total time of flight is twice this (provide we assume the ground is not sloping in any way)

total flight time is 2 secs

horizontal velocity (20ms⁻¹) is constant as there is no accelerating for acting horizontally

$s = vt$

$s = 20 \times 2$

$s = 40\text{m}$