

Total Time of Flight for an Object Shot Straight Upwards

What is the total time of flight for an object of mass m shot straight upwards at an initial speed v_0 ?

a.) $\left(\frac{mv_0}{g}\right)$

b.) $\left(\frac{v_0}{g}\right)$

c.) $\left(\frac{2v_0}{g}\right)$

d.) mgv_0

e.) $\left(\frac{v_0g}{m}\right)$