



A ball is thrown upward at  $t = 0$  from the ground at  $O$ . It reaches a maximum height  $y_{OA} = h$  at  $A$  when  $t = t_{OA}$ .

Find the total time  $\mathcal{T}$  from  $O$  to  $A$ ,  $t = \mathcal{T}$ .

- A)  $\mathcal{T} = \frac{v_0}{g}$  and  $\mathcal{T} = \sqrt{\frac{2h}{g}}$
- B)  $\mathcal{T} = \frac{v_0}{g}$  only
- C)  $\mathcal{T} = \sqrt{\frac{2h}{g}}$  only
- D) None of the above

“ $v = v_0 + a t$ ” implies that  $v_0 = g \mathcal{T}$ .

Also “ $s = v_0 t + \frac{1}{2} g t^2$ ” implies that  $\mathcal{T} = \sqrt{\frac{2 h}{g}}$ .

Answer **A**.

02.05-07 Evaluate the rising time 2004-3-24