

Answer on question #64771, Physics / Other

Question a ball is thrown vertically upward with a velocity of 19.6mfind? (i) the max height reached by the ball (ii) the time taken by the ball to reached the max height

Solution (i) Max height is (from energy conservation law):

$$mv^2/2 = mgh$$

$$h = \frac{v^2}{2g} = \frac{19.6^2}{2 * 9.8} = 19.6 m$$

(ii) Time taken to reach the heigt = time when velocity decrease to 0. Hence

$$v = gt$$

$$t = \frac{v}{g} = \frac{19.6}{9.8} = 2 s$$