

Answer on Question #70238, Physics / Other

A basketball referee tosses the ball straight up for the starting tip-off. At what velocity (in m/s) must a basketball player leave the ground to rise 1.11 m above the floor in an attempt to get the ball?

Solution

The initial speed of the player is

$$\begin{aligned}v &= \sqrt{2gh} \\ &= \sqrt{2 \times 9.8 \times 1.11} = 4.66 \text{ m/s.}\end{aligned}$$

Answer: 4.66 m/s.

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