

## Motion Equation Questions Worksheet 1

1. Calculate the displacement after 2.0 seconds of an object thrown straight up into the air at  $10\text{ms}^{-1}$
2. An object is in motion along a flat horizontal plane at  $5.2\text{ms}^{-1}$ . Calculate its displacement after 2.5 seconds.
3. Determine the velocity of an object 1.5 seconds after it is dropped in midair.
4. An object is thrown straight up at  $17\text{ms}^{-1}$ . Determine its velocity after 3.1 seconds.
5. Calculate the displacement of the object in part 4.
6. Calculate the maximum height of an object launched straight up from ground level at  $16\text{ms}^{-1}$ .
7. Calculate the time of flight of an object dropped from 10m above the ground.
8. An object thrown up at  $4.8\text{ms}^{-1}$  falls to the ground 2m below the starting height. Calculate the speed of the object just as it hit the ground.
9. Calculate the time of flight of the object in part 8.
10. Calculate the maximum height of the object in parts 8 and 9.