1. A rock is thrown off the top of a 250 m tall building with a horizontal velocity of 8.5 m/s.
   1. Complete the following table (you are not required to show work here):

|  |  |  |
| --- | --- | --- |
|  | x-direction | y-direction |
| initial velocity (v1) |  |  |
| acceleration (a) |  |  |

* 1. How long does it take for the rock to reach the ground?
  2. How far away from the base of the building does the rock hit the ground?

1. A bullet is shot horizontally out of a gun that is held 1.25 m above level ground. The bullet hits the ground 1250 m away from where the shooter is standing.
   1. How long is the bullet in the air?
   2. What was the initial horizontal velocity of the bullet?