## FREE FALL PROBLEMS

1. An Olympic diver jumps off a 3 meter height board into the water. The dive takes about 2 second.
a. What is the diver's initial velocity?

| Givens | Unknown | Equation | Substitute into <br> equation | Answer with Units |
| :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |
|  |  |  |  |  |

b. How high did they jump?

| Givens | Unknown | Equation | Substitute into <br> equation | Answer with Units |
| :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |
|  |  |  |  |  |

c. What was their final velocity right before they hit the water?

| Givens | Unknown | Equation | Substitute into <br> equation | Answer with Units |
| :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |
|  |  |  |  |  |

d. Fill in the graphs below of the diver from start to finish.

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