

**General Physics I–Honors: PHYS 101H (Fall 2022)**  
**Quick quiz 1**

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**Instructions**

These quick quizzes are low-stakes assessment tools to help cement your understanding of our material. They will help you remember the key facts and can serve as a study guide to help you focus on material you are less familiar with. These quizzes do not contribute to your grade and are for your own use.

1. **Without looking at your notes or the textbook, and without consulting with your neighbour**, write your answer to each question in the **first column**.
2. Discuss with your neighbour and use your notes or the textbook as needed to answer each question and write your answers to each question in the **second column**. You should complete the second column, but do not add anything to your first column.

There are four questions.

**Question 1**

An object goes from one point in space to another. At its destination, its displacement is:

1. either greater than or equal to
2. always greater than
3. always equal to
4. either smaller than or equal to
5. always smaller than
6. either smaller or larger

than the distance travelled.

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**Question 2**

The increase in pressure  $\Delta P$  (force per area) as you descend in a lake depends on your depth  $h$ , the density of water  $\rho$ , and  $g$ , the acceleration due to gravity. What combination of  $h$ ,  $\rho$  and  $g$  must  $\Delta P$  be proportional to?

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**Question 3**

An object has negative velocity and negative acceleration: is it slowing down or speeding up?

**Question 4**

We can order events in time. For example, event b may precede event c but follow event a, giving us a time order of events a, b, c. Hence there is a sense of the direction of time, distinguishing past, present and future. Is time a vector? If not, why not?

