

General Physics I–Honors: PHYS 101H (Fall 2023)
Quick quiz 5

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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

What is conserved in a perfectly inelastic collision? What is not conserved?

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Question 2

Two children sit on a merry-go-round, one at the outer edge and one halfway between the edge and the axis of rotation. What are the ratios of the angular and linear speeds of the two children?

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Question 3

Write down as many equations expressing Newton's second law as you can.

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Question 4

Suppose that a spring can launch a ball 24 m into the air, when fully compressed. How far up does the ball go if the spring is compressed only half as far?

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