

**Note!** : In PHY111, we see you as capable and diligent students. Our teaching philosophy is to support and encourage you to take charge of, and take responsibility for, your learning in physics, helping you develop into strong academic students. As the PHY111 team, we will do our utmost to create a learning environment that enables this. Therefore, please do your part—you will reap the rewards of your hard work in the future. Complete your PHY111 pre-tasks, quizzes, class tasks, and problem sets diligently. **Attend all classes, as this is where you will learn PHY111 physics - through talking physics, thinking physics and doing physics.**

Instructions:

- Please read the notes on vectors available on Ikamva or any other relevant resources you have. Engage with the material thoroughly and ensure that you fully comprehend it.
- Next, answer the questions in Pre-Class Task 2 and submit your completed task via Ikamva under the "Assignments" link by 8pm on Wednesday, 19th February.

Question 1

- 1.1 What is a vector? Give two examples of vectors you are familiar with and explain why they are classified as vectors.
- 1.2 Describe the different ways a vector can be represented using words, symbols, and sketches.
- 1.3 Define the resultant of two or more vectors.
- 1.4 Can the two forces, 10 N upward and 5 N downward, have a resultant of 3 N? Support your answer with a detailed calculation.
- 1.5 Determine the resultant of the following forces: 3 N, to the left and 6 N, at a bearing of  $60^\circ$ .