

Skills Task: Advanced Mechanics

Due Date: Friday 7th December 2018 (Week 8), Period 2

Date Distributed: Friday 23rd November, 2018

Task Weighting: 30%

Outcomes

- PH11/12-2 – designs and evaluates investigations in order to obtain primary and secondary data information
- PH11/12-3 – conducts investigations to collect valid and reliable primary and secondary data and information
- PH11/12-4 – selects and processes appropriate qualitative and quantitative data and information using a range of appropriate media
- PH11/12-6 – solves scientific problems using primary and secondary data, critical thinking skills and scientific processes
- PH11/12-7 – communicates scientific understanding and suitable language and terminology for a specific audience or purpose
- PH11/12-12 – describes and analyses qualitatively and quantitatively circular motion and motion in a gravitational field, in particular, the projectile motion of particles.

ASSESSMENT OUTLINE

1. WHAT AREAS OF LEARNING DOES THIS ASSESSMENT ADDRESS?

The Skills Task will address students' understanding of technical skills, techniques, the gathering and processing of first-hand data, and risk management, in Year 12 Physics Module 5: Advanced Mechanics.

2. WHY IS THE COMPLETION OF THIS ASSESSMENT IMPORTANT?

This task will draw together the above outcomes, by providing students with the opportunity to demonstrate their knowledge, understanding and skills in Year 12 Physics. This will allow them to gain feedback on areas of strength, as well as areas in which to improve, for the HSC. Students will utilise their problem-solving skills to solve real-world, Physics based problems.

3. WHAT STEPS DO I TAKE TO COMPLETE THIS TASK?

Task Outline

The task will incorporate a practical component, where students gather and present data, analysing relationships between components of Circular Motion. A theoretical data analysis task will also be undertaken.

The Skills Task is **45 minutes** in duration, with 5 minutes reading time. It will consist of practical and data analysis tasks with explicit instructions. These tasks will be monitored by the supervising teacher.

This task will be marked for accuracy upon completion of the task. All working must be shown to be awarded full marks.

Details for Submission

Skills task to be undertaken during class time, period 2 on Friday 7th December 2018.

Students will need to bring pens, pencils, a ruler and a board approved calculator to this task. All answers are to be completed on the paper.

Any student who is absent on the day must follow the illness/misadventure procedures in the school's assessment policy. Non-completion of the task without successful illness/misadventure appeal will receive a zero-mark and an N-Warning notification, as outlined in the Year 12 Assessment Booklet.

Students are to complete the task on the first day they return to school.

4. HOW WILL MARKS BE AWARDED TO MEASURE MY LEARNING?

Marks will be indicated on the paper for each question. The task consists of both written questions and procedural tasks which will be assessed by direct observation during the task(s). Students will need to show all working to achieve maximum marks.

Worked solutions, including feedback, will be provided with the marked paper.