

Assessment Task 1 – Class Test

Due Date: Wednesday 28/11/18, Period 2 Week 7 Term 4

Date Distributed: Wednesday 14th November 2018

Task Weighting: 20%

Outcomes

MS11-1 uses algebraic and graphical techniques to compare alternative solutions to contextual problems

MS11-2 represents information in symbolic, graphical and tabular form

MS11-6 makes predictions about everyday situations based on simple mathematical models

MS11-7 develops and carries out simple statistical processes to answer questions posed

MS11-10 justifies a response to a given problem using appropriate mathematical terminology and/or calculations

ASSESSMENT OUTLINE

1. WHAT AREAS OF LEARNING DOES THIS ASSESSMENT ADDRESS?

You will need to develop solutions and provide reasoning to a wide variety of problems and demonstrating your understanding of the following concepts:

Linear Relationships

- Interpret features of a straight-line graph and its equation ($y = mx + c$), including the gradient and intercepts.
- Determine a direct variation relationship from a written description, a straight-line graph passing through the origin, or a linear function in the form $y = mx$.
- Analyse a linear model, graphically or algebraically, to solve practical problems.
- Identify and evaluate the limitations of a linear model in a practical context.

Exploring & Describing Data

- Calculate the mean, median, mode, range, interquartile range and standard deviation of grouped and ungrouped data, and draw conclusions using these statistical measures.
- Can determine quartiles, deciles, percentiles and outliers (and their effect on data).
- Able to construct and compare box-plots using the 5-number summary.
- Identify modality and skewness of data.

Budgeting & Household Expenses

- Calculate costs involved with the purchase and running of a car, including loan repayments, registration, insurance, stamp duty, repairs, service and fuel consumption.
- Can identify the different forms of insurance (CTP, third party property, comprehensive).
- Prepare and/or interpret a budget.

2. WHY IS THE COMPLETION OF THIS ASSESSMENT IMPORTANT?

- This task will draw together the above outcomes and assess a range of Mathematical skills and techniques that you have covered in class.
- The structure and questioning style presented in this task will mirror that of the HSC examination.
- It will be used by you and your teachers to assess your knowledge and understanding of the course outcomes and allow you to refine your skills in preparation for the HSC examination.

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

Task Outline

This is a **50 minute examination**. The task will be completed in exam conditions in class during the timetable period on Wednesday 28th November.

A HSC Formulae Sheet will be provided with the exam.

Section 1: Multiple-Choice

- This section contains a selection of 10 multiple-choice questions worth one mark each.
- The questions will cover the 3 topic Areas of Learning above.
- They will increase in difficulty throughout the section.
- You should allow **15 minutes** to complete this section.

Section 2: Written Response

- This section contains a mixture of short and long response questions, worth one mark or more.
- This section will be split into the 3 Areas of Learning above.
- Each topic section will increase in difficulty.
- You should allow **35 minutes** to complete this section.

As this is an examination you will need to prepare for this task by:

- Making summary notes of each topic listed above (mind map, flow chart, dot points)..
- Regularly completing practice examination questions.
- Seeking teacher assistance on unclear work.
- Ensuring all set work is up to date.

Details for Submission

For successful completion of this examination you must bring the following equipment.

- Board approved calculator
- Blue or black pen,
- Pencils and eraser for graphs
- A ruler

Students who are absent from the examination, or have a legitimate reason for missing the task, must notify the school before the exam commences. To avoid a zero mark being awarded, any absence must be supported by valid misadventure/illness documentation as outlined in the Year 12 Assessment Booklet.

You will also need to complete a self-reflection on your assessment that is to be submitted to your teacher after receiving the solutions. This is to assist you and your teacher in refining your knowledge, skills and examination technique for future assessments.

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

Worked solutions with marking criteria for each question will be provided when the exam is marked and returned. You should ensure that you go through these solutions thoroughly to correct your mistakes and ask your teacher if there is anything you are unsure about.