# Chapter 1: Exploring Log Functions

Studying Tips: just like all the previous units, we always begin by understanding the characteristics of a new function. The key in this chapter is to understand the relationship between log and exponents. Here is a little trick for you to read logs:

To raise b into y, what is the power, x, you need.

Also, make sure that you know how to graph the basic log function.

# Chapter 2: Transformations of Log Functions

Studying Tips: in this chapter, you will be required to 1) graph transformations/inverse 2) list the transformations and 3) state the key elements of the new graph. Transformation questions are usually worth 4-5 marks.

# Chapter 3: Evaluating Logs

Studying Tips: this chapter is very straightforward as long as you understand chapter 1 material very well. When in doubt, change log into exponents and solve from there. These questions are almost like giveaways on tests. Evaluation questions are usually worth 1-2 marks.

# Chapter 4: Laws of Logs

Studying Tips: there are two types of questions that might appear in this chapter: 1) evaluating logs and 2) simplifying logs. The three laws are relatively intuitive as they are related to the laws of exponents. Evaluation questions are worth 2 marks, and simplifying questions are usually worth 3 marks.

# Chapter 5: Solving Exponential Equations

Studying Tips: this chapter comes at two parts: 1) solving equations with the same base and 2) solving equations with different bases. The former is highly intuitive as it functions the same way as linear algebra; however, the latter involves solving using logs. At this point, we recommend you to study both log and exponent laws; you should understand the theory behind solving equations rather than solely memorizing the steps. These questions are usually worth 4 marks.

# Chapter 6: Solving Log Equations

Studying Tips: similar to the exponential equations, there are mainly two variations of solving log equations: 1) solving equations with the same base and 2) solving equations with different bases. Either way involves the laws of log you learned in chapter 4. Make sure to check for inadmissible answers when solving log equations. These questions may be worth 4-5 marks.

# Chapter 7: Solving Problems with Log and Exponential Functions

Studying Tips: there are five types of word problems in this chapter. Teachers will most likely test you on two kinds of problems: one for exponential function and one for log function. Word problems in this chapter are worth 3 marks. One little trick to check your answer is to see if your answer is reasonable for the given question; for example, if you get 10 million decibels as an answer for a word problem, it is highly likely that you have made a mistake in your calculations.