Contents

To the Teacher

The problems presented in these worksheets are intended for students studying **Discrete Mathematics** and assume no calculus background. Problems dealing with optimisation should be solved using methods other than calculus.

Some problems need to be done prior to others and are listed below:

Problems 5 and 6 before 7 and 8

Problem 12 before 13

Problem 16 before 17

Problem 21 before 23

Problem 24 before 25

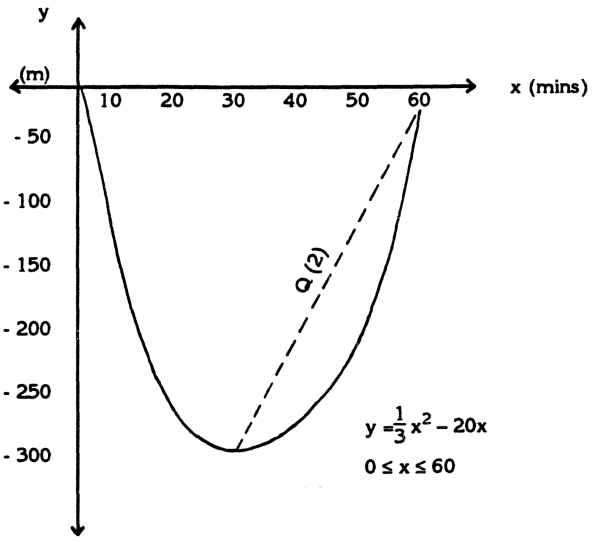
Those parts of the problems for which a solution is easily presented are given. The interpretive and descriptive facet of each problem should be fully discussed with the class in order to highlight:

(a) the characteristic of the model, and

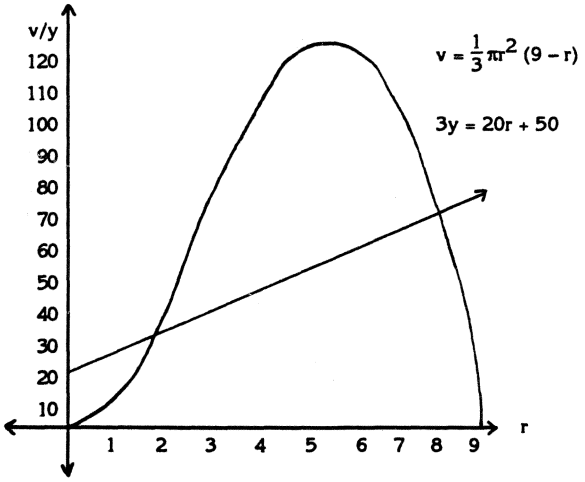
(b) the discrepancies between the model and reality.

Year 11 is often the first experience students have with problem solving and the problems should be presented with significant structure. Year 12 students can be expected to provide their own structure; hence, wherever appropriate, problems have been stated in general terms only and students are to investigate the appropriate solutions. Obviously, the amount of teacher interaction will differ from student to student.

1. Avoiding the Bends



2. More Icecream!



12. Varying Tappers A