Pure Mathematics 1

# CHAPTER 5

# CHAPTER 6 Trigonometric Ratios

## 6.1 THE COSINE RULE

Using two of the sides of a triangle and the angle between them, it is certainly possible to represent the length of the third side in a simple or complex way.

Generally speaking, if you have enough time, I would suggest that you try to represent it using your own methods. Here is some

Pythagorean theorem, Vector,

Constructing the relationship between the three side lengths can be done by trying to create some intermediate conditions.

More time is spent on arithmetic when proving using vectors, and more time is spent looking for relationships on images when proving using the Pythagorean theorem.d

## 6.2 THE SINE RULE

## 6.3 AREAS OF TRIANGLES

## 6.4 SOLVING TRIANGLE PROBLEMS

## 6.5 GRAPHS OF SINE, COSINE AND TANGENT

## 6.6 TRANSFORMING TRIGONOMETRIC GRAPHS

## CHAPTER REIVEW 6

Proactively finding or constructing triangles that can use the cosine rule and the sine rule can provide new ideas for solving problems.

# CHAPTER 8 Differentiation

## 8.1 GRADIENTS OF CURVES

The fact of Differentiation is to be a matter of dividing rounded things in the limit, so don’t forgot to use a calculator when necessary (for example, when not deriving formulas but performing calculations).

## 8.2 FIINDING THE DERIVATIVE

## 8.3 DIFFERENTIATING xn

**It is not given explicitly in the textbook, but is only sketched out with the words "can use the definition of derivative to find and expression for the derivative of xn".** So let us using the idea of factorization, prove that differentiating xn.

## 8.4 DIFFERENTIATING QUADRATICS

## 8.5 DIFFERENTIATING FUNCTIONS WITH TWO OR ORE TERMS

## 8.6 GRADIENTS, TANGENTS AND NORMALS

## 8.7 SECOND ORDER DERIVATIVES

## CHAPTER REVIEW 8