

Section 4: More about differentiation

Crucial points

1. **Remember that you can't use the second derivative test when both the first and second derivatives are zero**

If the second derivative is zero, use the gradient method.

2. **In a maximum or minimum problem, make sure that you answer the question**

For example, in a problem involving maximising the volume of a shape, make sure that you calculate the actual maximum volume obtained from the stationary value if you are asked for this.

3. **Draw diagrams**

When dealing with problems involving maximising or minimising, you should draw a clear diagram, which will help you to write down appropriate equations.