Section 1: The shape of curves

Crucial points

1. **Remember that points of inflection are not always stationary points**
   A point of inflection is where the curve changes from convex to concave or vice versa. This may be at a stationary point, but not always.

2. **Be careful when the second derivative is zero**
   Although the second derivative is always zero at a point of inflection (stationary or non-stationary), the converse is not necessarily true: there may be points where the second derivative is zero that are not points of inflection. At a point of inflection, the second derivative changes sign.