GRADIENTS OF LINES AND CURVES 2

- Draw a large accurate graph of $y = x^2$ using the same scale on both axes.

> A tangent to a curve at a particular point P is a straight line that just touches the curve at P and has the same gradient as the curve at P.

- Draw the best tangent you can to your graph of $y = x^2$ at the point $x = 1$. Find the gradient of your tangent.

- Repeat this for several other points on your graph.

- Can you see a relationship between the value of x at a point P and the gradient of the tangent to the curve at P?

- What is the gradient function for the function x^2?

- Now repeat these ideas using a large accurate graph of $y = x^3$ to see if you can find the gradient function for x^3.