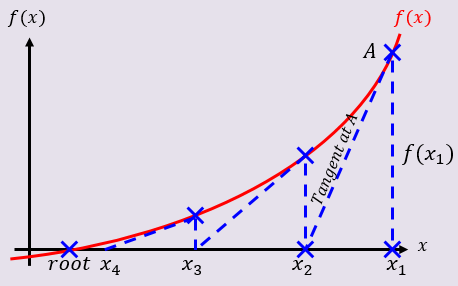
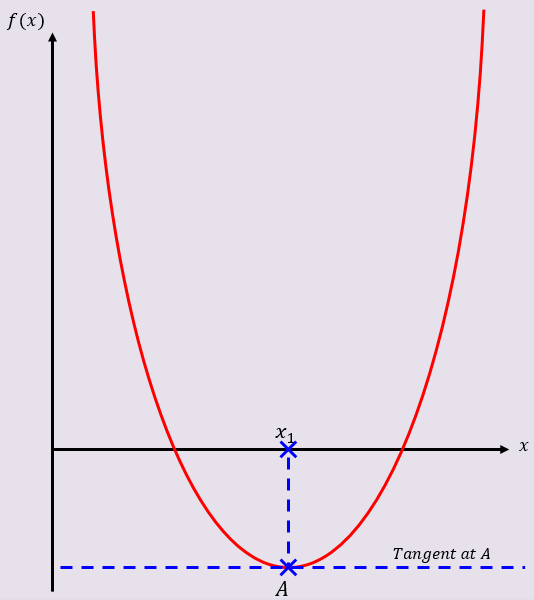
**10C Newton Raphson**



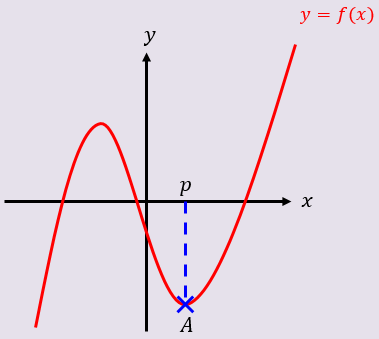


1. The diagram shows part of the curve with equation , where .

The point , with x-coordinate , is a stationary point on the curve.

The equation f(x)=0 has a root, , in the interval .

1. Explain why is not suitable to use as a first approximation to when applying the Newton-Raphson method to



1. Using as a first approximation to , apply the Newton-Raphson method procedure twice to find a new approximation for , to 3dp.
2. By considering the change of sign in over an appropriate interval, show that your answer to part b is accurate to 3 decimal places