9. Use Trapezoidal rule to find the

   a) Area enclosed by the curve $y = \sqrt{4 - x^2}$ the x axis and the lines $x = 0$ and $x = 2$ with

      i) 2 sub-intervals

      ii) 4 sub-intervals

   b) Evaluate $\int_0^2 \sqrt{4 - x^2}\, dx$

   c) Find the percentage error when using 4 sub-intervals correct to 1 d.p.

10. Use Simpson's rule to find the

   a) Area enclosed by the curve $y = x^2 + 1$ the x axis and the lines $x = 0$ and $x = 2$ with

      i) 3 function values

      ii) 5 function values

   b) Area under the curve $y = lnx$ between $x = 1\ and\ x = 5$. Use the ordinates given

x	1	2	3	4	5
y	0	0.693	1.099	1.386	1.609

   c) Volume of the solid of revolution when the above area (b) is rotated about the x axis. Just show your working. There is no need to evaluate your answers.

11. When using Simpson's rule or the trapezoidal rule explain the relationship between n strips and m function or y values.

12. Using the trapezoidal rule with 2 strips evaluate an approximation for $\int_0^2 2^{-x}\, dx$.

    Find the exact value for this area correct to 3dp. Find the percentage error.