



- 4** xxx is a destitute student. Since you're a kind person (with a lot of money), you're willing to help xxx get out of this deplorable situation. How much do you need to pay xxx, in a single payment, to make him a millionaire in 2 years. The account to which you deposit the payment earns 15% interest, annually.

**5** Evaluate the following integrals

**i**  $\int_0^{\infty} 2x(x^2 + 1)^{-\frac{3}{2}} dx.$

**ii**  $\int_1^{\infty} (5x + 1)^{-4} dx.$

**6** Find the area under the graph  $y = \ln x$  for  $1 \leq x \leq 10$ .