

Additional Maths Mock Ex. 1

By Jessica Chiu

1. α , β are the roots of the quadratic equation $x^2 + (m+1)x + (2m-3) = 0$, where m is a real number.
 - a) Show that α , β are real and distinct.
 - b) Find $(\alpha - 3)(3 - \beta)$ in terms of m .
 - c) Given that $3 < \alpha < \beta$.
 - (i) Find the range of m .
 - (ii) If $(\alpha - \beta)^2 < 30$, find the range of the possible values of m .