

Question 1

(a) The equation $x^2 + 2px + (3p + 4) = 0$, where p is a positive constant, has equal roots.

(i) Find the value of p .

(ii) For this value of p , solve the equation $x^2 + 2px + (3p + 4) = 0$.

(b) Find the equation whose roots are three times those of $x^2 + 9x - 12 = 0$.