Algebra 9: Nature of quadratic roots

Example

Find the discriminant of the quadratic equation x2 – 4x – 9 = 0

Example 1:

X2 + 4x + k = 0

Find the range of values of k for which the quadratic has 2 real roots.

Question 1:

Find the range of values of t for which x2 + 8x + t = 0 has two real roots.

Question 2:

Find the values of t for which 4x2 + tx + 25 = 0 has two equal roots.

Question 3:

Find the range of values of t for which x2 – x(2t + 2) + (5t +1) = 0 has no real roots.