Short Assessment 2

Time Allowed: 15 minutes   **Total Marks: 15**

1. Find the discriminant of the following quadratic expressions:

    (a) $2x^2 + 3x - 6$

    (b) $3x^2 - 5x + 2$

                                                                      (2 marks)

2. Use the discriminant to determine the number of real roots of each of the following quadratic equations:

    (a) $x^2 + 5x - 2 = 0$

    (b) $2x^2 - 3x + 6 = 0$

                                                                      (4 marks)

3. (a) Find the discriminant of $2x^2 - 5x + k$ in terms of k.

(2 marks)

(b) Given that the quadratic equation $2x^2 - 5x + k = 0$ has two distinct real roots, find the set of possible values of k.

(3 marks)

4. The quadratic equation $px^2 + 7x + p = 0$ has repeated real roots.

Find the possible values of the constant p.

(4 marks)

- End of Test -