

Name : \_\_\_\_\_

## Nature of the Roots

ES1

For the quadratic equation  $ax^2 + bx + c = 0$ ,

If  $b^2 - 4ac > 0$ , the roots are real and unequal.

If  $b^2 - 4ac = 0$ , the roots are real and equal.

If  $b^2 - 4ac < 0$ , the roots are unreal(complex).

Find the nature of the roots using the discriminant.

1)  $2s^2 + 9 = 0$

2)  $k^2 + 4k + 4 = 0$

3)  $5g^2 + 2g - 3 = 0$

4)  $4x^2 - 3x + 2 = 0$

5)  $8u^2 + 5u = 0$

6)  $3p^2 + 7p + 8 = 0$

7)  $9m^2 - 6m + 1 = 0$

8)  $7h^2 - 5 = 0$