

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

## Nature of the Roots

MS1

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)  $2n^2 + \sqrt{3}n - 8 = 0$

2)  $3v^2 - 2v + 9 = 0$

3)  $d^2 - 5d = -7$

5)  $(2t - 1)(t - 3)$

7)  $3q^2 + \frac{4}{3} = -4q$

8)  $y^2 - 8 = 0$

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