



## Nature of Roots

Name \_\_\_\_\_

Score \_\_\_\_\_

RQ:22

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

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

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

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

Find the nature of roots for each quadratic equation.

1)  $3t^2 - 9t - 1 = 0$

2)  $k^2 - 3 = 0$

3)  $5x^2 + x + 6 = 0$

4)  $2m^2 - 7m + 8 = 0$

5)  $u^2 + 5u - 7 = 0$

6)  $4y^2 - 3y - 5 = 0$

7)  $z^2 + 2z = 0$

8)  $n^2 - 6n + 9 = 0$



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## Answer key

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