

## CHARACTER OF THE ROOTS

Name \_\_\_\_\_

Class \_\_\_\_\_

Date \_\_\_\_\_

### A N S W E R S

1a \_\_\_\_\_

1b \_\_\_\_\_

2a \_\_\_\_\_

2b \_\_\_\_\_

1. a. For which values of  $k$  does  $x^2 + kx + 9 = 0$  have one double root? Does it have any real roots for  $k = -10,5$  and  $k = 0,7$  ?

b. For which values of  $k$  does  $16x^2 + kx + 1 = 0$  have two imaginary roots ? Does it have any real roots for  $k = 0,003$  and  $k = -20,4$  ?

2. a. For which values of  $k$  does  $15x^2 - dx + \frac{1}{4} = 0$  have two real roots? Give an example of positive value of  $d$  .

b. For which values of  $k$  will  $\frac{1}{4}x^2 - dx + 11 = 0$  have two real roots? Give an example of negative value of  $d$  .

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