

Name _____
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Date _____
Pre-Calculus

Using the Nature of the Roots

1. For what values of k is the roots of $kx^2 - 4x + 2 = 0$ real?
2. For what value of k are the roots of $x^2 - 3x + k = 0$ equal?
3. For what values of k are the roots of $kx^2 - 4x + 7 = 0$ imaginary?
4. For what value of k are the roots of $y = x^2 + 10x + k = 0$ equal?

5. For what values of k are the roots of $x^2 + 5k + k = 0$ are real?

6. For what value of k are the roots of $-2x^2 + kx - 6 = 0$ imaginary?

- 1) 7 2) -7 3) 3.5 4) 9

7. The roots of $x^2 - kx + 7 = 0$ are real when k is equal to:

- 1) 1 2) -4 3) 10 4) -5

8. The roots of $x^2 + bx + 8 = 0$ are imaginary when b is equal to:

- 1) -6 2) 1 3) 6 4) 10