

Name : _____

Nature of the Roots

1) If the quadratic equation $nx^2 - 4\sqrt{6}x + 12 = 0$ has unreal roots, then find the values of n.

2) The equation $12z^2 + \dots$ Find the values for s.

3) If $r^2 - dr + 25 = 0$ has \dots for d.

4) For what values of t \dots equal?

5) Find the values for k, if the equation $kx^2 - 8x + 1 = 0$ has real roots.

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Answer key

Sheet 3

Nature of the Roots

- 1) If the quadratic equation $nx^2 - 4\sqrt{6}x + 12 = 0$ has unreal roots, then find the values of n .

$$n > 2$$

- 2) The equation $12z^2 + \dots$ has real roots. Find the values for s .

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- 3) If $r^2 - dr + 25 = 0$ has real roots, find the values for d .

- 4) For what values of t are the roots of the equation $x^2 + tx + 1 = 0$ equal?

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$$t > -\frac{17}{8}$$

- 5) Find the values for k , if the equation $kx^2 - 8x + 1 = 0$ has real roots.

$$k \leq 16$$