Name : _____

Nature of the Roots

MS2

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) $y(y - 3) = -5$

2) $\frac{9}{7}h^2 - 6h + 7 = 0$

3) $(g + 8)^2 = 0$

5) $4u^2 - \sqrt{3}u + 3$

PREVIEW

Gain complete access to the largest collection of worksheets in all subjects!

Members, please log in to download this worksheet.

Not a member? Please sign up to gain complete access.

www.mathworksheets4kids.com

7) $0.6p^2 - 7p - 5 = 0$

8) $x^2 + 2x + 1 = 0$

Name : _____

Answer key

Nature of the Roots

MS2

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) $y(y - 3) = -5$

$b^2 - 4ac = -1$

The roots ar

2) $\frac{9}{7}h^2 - 6h + 7 = 0$

real and equal.

3) $(g + 8)^2 = 0$

$b^2 - 4ac = 0$

The roots ar

$) < 0$

unreal(complex).

5) $4u^2 - \sqrt{3}u + 3$

$b^2 - 4ac = -4$

The roots ar

> 0

real and unequal.

PREVIEW

Gain complete access to the largest collection of worksheets in all subjects!

Members, please log in to download this worksheet.

Not a member? Please sign up to gain complete access.

www.mathworksheets4kids.com

7) $0.6p^2 - 7p - 5 = 0$

$b^2 - 4ac = 61 > 0$

The roots are real and unequal.

8) $x^2 + 2x + 1 = 0$

$b^2 - 4ac = 0$

The roots are real and equal.