

Notation and Proof

This month has exactly 29 days		It is February in a leap year
This month has at least 29 days		It is February in a leap year
The solutions to an equation are $x = +1$ or $x = -1$		$(x + 1)(x - 1) = 0$
Three straight line segments in 2D meet at exactly 2		Exactly 2 of 3 straight line segments in 2D are parallel
Three straight lines in 2D meet at exactly 2 points		Exactly 2 of 3 straight lines in 2D are parallel
A polygon is a square		A polygon has four sides
$x^2 = 9$		$x = 3$
$x^2 = 9$		$x = \pm 3$
$\sqrt{x} = 3$		$x = 9$
$\sin x = 1$		$x = 90^\circ$
n^2 is a multiple of 5		n is a multiple of 5
k is divisible by 3		$k + 1$ is even
The discriminant of a quadratic equation is non-negative		The quadratic equation has two distinct roots

Notation and Proof - Answers

This month has exactly 29 days	\Leftrightarrow	It is February in a leap year
This month has at least 29 days	\Leftarrow	It is February in a leap year
The solutions to an equation are $x = +1$ or $x = -1$	\Leftrightarrow	$(x + 1)(x - 1) = 0$
Three straight line segments in 2D meet at exactly 2	None	Exactly 2 of 3 straight line segments in 2D are parallel
Three straight lines in 2D meet at exactly 2 points	\Leftrightarrow	Exactly 2 of 3 straight lines in 2D are parallel
A polygon is a square	\Rightarrow	A polygon has four sides
$x^2 = 9$	\Leftarrow	$x = 3$
$x^2 = 9$	\Leftrightarrow	$x = \pm 3$
$\sqrt{x} = 3$	\Leftrightarrow	$x = 9$
$\sin x = 1$	\Leftarrow	$x = 90^\circ$
n^2 is a multiple of 5	\Leftarrow	n is a multiple of 5
k is divisible by 3	None	$k + 1$ is even
The discriminant of a quadratic equation is non-negative	\Leftarrow	The quadratic equation has two distinct roots