

# Operators

# Arithmetic Operators

- ▶ + Additive operator
- ▶ - Subtraction operator
- ▶ \* Multiplication operator
- ▶ / Division operator
- ▶ % Remainder operator

Assume integer variable **A** holds **10** and variable **B** holds **20**,  
then:

Operator	Description	Example
+	Addition - Adds values on either side of the operator	A + B will give 30
-	Subtraction - Subtracts right hand operand from left hand operand	A - B will give -10
*	Multiplication - Multiplies values on either side of the operator	A * B will give 200
/	Division - Divides left hand operand by right hand operand	B / A will give 2
%	Modulus - Divides left hand operand by right hand operand and returns remainder	B % A will give 0

# Unary Operators: A holds 10 and variable B holds 20

- ▶ + Unary plus operator; indicates positive value (numbers are positive without this, however)
- ▶ - Unary minus operator; negates an expression
- ▶ ++ Increment operator; increments a value by 1
- ▶ -- Decrement operator; decrements a value by 1
- ▶ ! Logical complement operator; inverts the value of a boolean

++	Increment - Increases the value of operand by 1	B++ gives 21
--	Decrement - Decreases the value of operand by 1	B-- gives 19

# Equality and Relational Operators

- ▶ == Equal to
- ▶ != Not equal to
- ▶ > Greater than
- ▶ >= Greater than or equal to
- ▶ < Less than
- ▶ <= Less than or equal to

Assume integer variable **A** holds **10** and variable **B** holds **20**,  
then:

<b>==</b>	Checks if the values of two operands are equal or not, if yes then condition becomes true.	<b>(A == B) is not true.</b>
<b>!=</b>	Checks if the values of two operands are equal or not, if values are not equal then condition becomes true.	<b>(A != B) is true.</b>
<b>&gt;</b>	Checks if the value of left operand is greater than the value of right operand, if yes then condition becomes true.	<b>(A &gt; B) is not true.</b>
<b>&lt;</b>	Checks if the value of left operand is less than the value of right operand, if yes then condition becomes true.	<b>(A &lt; B) is true.</b>
<b>&gt;=</b>	Checks if the value of left operand is greater than or equal to the value of right operand, if yes then condition becomes true.	<b>(A &gt;= B) is not true.</b>
<b>&lt;=</b>	Checks if the value of left operand is less than or equal to the value of right operand, if yes then condition becomes true.	<b>(A &lt;= B) is true.</b>

# Conditional Operators

- ▶ &&    Conditional-AND
- ▶ ||    Conditional-OR
- ▶ ?:    Ternary (shorthand for if-then-else statement)