# Types, Values, Operators: Part 1

1. Declare 2 variables *a* and *b*, such that *a > b*, and define values for them. Output their
   1. sum
   2. difference (between *a* and *b*)
   3. product
   4. quotient (between *a* and *b*)
   5. remainder (between *a* and *b*)

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| **Input** | **Output** | | | | |
| 14, 5 | 19 | 9 | 70 | 2.8 | 4 |
| 99, 11 | 110 | 88 | 1089 | 9 | 0 |
| 81, 16 | 97 | 65 | 1296 | 5.0625 | 1 |

1. Print your name and age in the following format: “My name is \_\_\_\_, I am \_\_\_\_ .”
2. Swap 2 variables, without using any other variables.

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| **Input** | **Output** |
| a = 8, b = 12 | a = 12, b = 8 |
| a = 10, b = 20 | b = 10, a = 20 |

1. Declare a variable with defined value. Print the last digit of the number.

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| **Input** | **Output** |
| 78756 | 6 |
| -122 | -2 |
| 8 | 8 |
| 0 | 0 |

1. Check whether a given number is negative. Print “yes”, if it is negative, print “no” otherwise.

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| **Input** | **Output** |
| 0 | “no” |
| -71 | “yes” |
| 89 | “no” |

1. Declare variable. Initialize it with the value, which shows temperature in degrees Celsius. Print its equivalent in degrees Fahrenheit. To convert temperatures in degrees Celsius to Fahrenheit use the following formula: *°C \* 1.8 +32 = °F* .

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| **Input** | **Output** |
| -40 | -40 |
| 0 | 32 |
| 50 | 122 |

1. For a given three digit number calculate the sum of its digits.

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| **Input** | **Output** |
| 306 | 9 |
| 912 | 12 |
| 505 | 10 |

1. Given two numbers print 1 if one of them is divisible by the other one, otherwise print 0.

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| **Input** | **Output** |
| 3, 14 | 0 |
| 18, 2 | 1 |
| 7, 21 | 1 |

1. Given any number between 1 and 12. Print the name of the respective month.

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| **Input** | **Output** |
| 2 | “February” |
| 4 | “April” |
| 11 | “November” |

1. Given three numbers. Find the maximum one.

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| **Input** | **Output** |
| -4 , 6, 0 | “6 is maximum” |
| 1020, 500, - 450 | “1020 is maximum” |
| 14, 8, 14 | “14 is maximum” |

1. Given a number. Print its absolute value.

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| **Input** | **Output** |
| -123 | 123 |
| 35 | 35 |
| 0 | 0 |

1. Given a number. Print “odd” if the number is odd and “even” if it’s even.

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| **Input** | **Output** |
| 123 | “odd” |
| 35 | “odd” |
| 70 | “even” |

1. Declare three variables. Two of them are the bounds of a range. Print “In bounds”, if the third number is in the range, otherwise print “Out of bounds”.

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| **Input** | **Output** |
| -12, 9, 13 | “Out of bounds” |
| 0, 15, 8 | “In bounds” |
| 10, 19, 9 | “Out of bounds” |

1. Given three sides of a triangle. Check whether the triangle is valid or not. Print “yes” if it is valid and “no" otherwise. (Triangle is valid if the sum of its two sides are greater than the third side).

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| **Input** | **Output** |
| 2, 3, 5 | “no” |
| 3, 4, 5 | “yes” |
| 10, 5, 12 | “yes” |
| 47, 11, 26 | “no” |

1. Given a number. Determine whether it consists of 2 digits and whether the first digit is greater than the second one. Print “yes” if it is, otherwise print “no”.

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| **Input** | **Output** |
| 12 | “no” |
| 0 | “no” |
| 86 | “yes” |

1. Given a number round it to the nearest 50 without using “if” operator (conditions). The easy way to get integer part after division is Math.round(a / k).

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| **Input** | **Output** |
| 25 | 50 |
| 70 | 50 |
| 75 | 100 |
| 24 | 0 |
| 124 | 100 |
| 50 | 50 |