For each of the prompts, write the answer to the prompt in Python on the left side, write the answer to the prompt in Javascript on the right side. The best way to do this is to write a small program in the appropriate IDE, then copy/paste the *tested and working* code into the appropriate box.

1. Declare a Variable with a value. Reassign a variable’s value

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| --- | --- |
| x = 10  x = 13 | Variables can be declared in 4 ways   * Automatically * Using Var * Using Let * Using const   x = 5; 🡪 x = 12;  var k = 10; 🡪 var k = 13;  let y = 6; 🡪 This can’t be reassigned  const r = 12; 🡪 This can’t be reassigned |

1. Assign the result of an expression to a variable.

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| --- | --- |
| x += y  x -= y  x \*= y  x /= y  x %= y  x \*\*= y  x //= y  x &= y  x |= y  x ^= y  x >>= y  x <<= y | x = y  x += y  x -= y  x \*= y  x /= y  x %= y  x \*\*= y |

1. Change the data type of a variable’s value and assign it to the original value
   1. Convert to string
   2. Convert to number (integer or float)

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| --- | --- |
| x = str(3.5)  x = float(10) | let num = 15; let text = num.toString();  x = parseFloat("40.00"); |

1. Create a conditional statement that branches depending on if a variable’s value is greater than or equal to 7, greater than 4, or neither

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| --- | --- | --- |
| a = 7  b = 4  if b >= a:      print("b is greater than or equal to a")  if a >= b:      print("A is  greater than or equal to b ") |  | a = 7  b = 4  if (a <= b) {      greeting = "Good day";    }  if (b <= a) {      Greeting = "Have an amazing"  } |

1. Create a conditional statement that only branches if the variable’s value is ‘blue’ OR ‘green’

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| --- | --- |
| b = "blue"  if (b == b):      print("Blue") | g = "green"  if (g == g){   console.log(g)  } |

1. Create a conditional statement that only branches if the variable’s value is ‘black’ AND ‘yellow’

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| --- | --- |
| b = "Black"  if (b == b):      print("Black") | g = "Yellow"  if (g == g){   console.log(g)  } |

1. Create a function that outputs “Hello” to the console

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| --- | --- |
| Print(“Hello”) | Console.log(“Hello”) |

1. Create a function that returns “Hello”

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| --- | --- |
| def greets():       return "Hello"  greets() | function myFunction() {      return "Hello"  } |

1. Create a function that takes two arguments, adds their values together, assigns the new value to a local variable, and returns that variable

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| --- | --- | --- |
| def cheese(Milk, cheese):      macNcheese = Milk + cheese      return macNcheese  print(cheese(60, 9)) |  | function cheese(Milk, cheese) {      macNcheese = Milk + cheese      return macNcheese  }  cheese(60, 9);  console.log(macNcheese); |

1. Create a loop that repeats while a variable’s value is true

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| --- | --- |
| while True:    print("Your mom") | while(true){      console.log("Your mom")  } |

1. Create a loop that repeats while a variable’s value is true, but will break mid-loop if another variable equals false

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| --- | --- |
| i = True  x = 0  while i:      print(x)      x += 1      if x > 8:          break | var i, x;  i = true;  x = 0;  while (i) {  console.log(x);  x += 1;  if (x > 8) {  break;  }  } |

1. Create an array/list that contains three strings

grocries = ['Toilet paper', 'Milk', 'Juice']

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var grocries = ['Toilet paper', 'Milk', 'Juice']

1. Using the array from #12, remove the last element in the array

|  |  |
| --- | --- |
| grocries = ['Toilet paper', 'Milk', 'Juice']  grocries.remove("Juice")  print(grocries) | var grocries;  grocries = ["Toilet paper", "Milk", "Juice"];  grocries.remove("Juice");  console.log(grocries); |

1. Using the array from #12, remove the first element in the array

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| --- | --- |
| grocries = ['Toilet paper', 'Milk', 'Juice']  grocries.remove("Toilet paper")  print(grocries) | var grocries;  grocries = ["Toilet paper", "Milk", "Juice"];  grocries.remove("Toilet paper");  console.log(grocries); |

1. Using the array from #12, remove the element in the middle (index 1)

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| --- | --- |
| grocries = ['Toilet paper', 'Milk', 'Juice']  grocries.remove("paper")  print(grocries) | var grocries;  grocries = ["Toilet paper", "Milk", "Juice"];  grocries.remove("Milk");  console.log(grocries); |

1. Using the array from #12, output the first element

|  |  |
| --- | --- |
| grocries = ['Toilet paper', 'Milk', 'Juice']  print(grocries[0]) | var grocries;  grocries = ["Toilet paper", "Milk", "Juice"];  console.log(grocries[0]); |

1. Create an empty array. Then add a string element to it

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| --- | --- |
| Bike = []  Bike.append("Wheels")  print(Bike) | Bike = []  Bike.push("Wheels")  console.log(Bike) |

1. Using the array from #12, use a loop to output each element

|  |  |
| --- | --- |
| grocries = ['Toilet paper', 'Milk', 'Juice']  for item in grocries:      print(item) | var list = ["bike", "car", "train"]  for(item in list){      console.log(list[item])  } |

1. Using the array from #12, use a loop to output the index of each element

|  |  |
| --- | --- |
| grocries = ["Toilte paper", "Milk", "Juice"]    for item in grocries:      print(grocries.index(item)) | var grocries = ['Toilet paper', 'Milk', 'Juice']  for (item in grocries)  {      console.log(item);  } |

1. Create an object with one property and one method. The property value will be a string, and the method will output the value of this object’s property.

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1. Using the object in #20, print the name of each property/method key in the object

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1. Create a variable whose value is a string equal to the name (key) of the property of the object in #20. Output the property value of the object by using the variable (not the property name)

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| --- | --- |
|  |  |

1. Create a two-dimensional array
   1. Create an array/list with three elements
   2. Each element is another array/list with three elements whose values are strings

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| --- | --- |
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1. Using the array in #23, use two loops (one inside the other) to output all 9 elements in the multi-dimensional array.

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1. Add a new property to the object used in #20 with a number value

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|  |  |