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| **Skill 19.01 Exercise 1** |
| What is the purpose of variables in computer programs? |
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| **Skill 19.02 Exercise 1** |
| You want to create a number guessing game. When the game loads, a secret number will be generated. Then the user will be provided 3 guesses to identify the number. What variables would you need to store the necessary data for the game? |
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| For each variable, write statements to show how you would declare and/or initialize the variable |
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| **Skill 19.03 Exercise 1** | |
| Indicate whether each of the following variable declarations are legal or illegal. If it is illegal, indicate why. | |
| **code** | **legal/illegal** |
| var 1231abc; |  |
| var big-number; |  |
| var name2; |  |
| var myVar\*2; |  |
| 2 = var myNum; |  |
| var var; |  |

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| **Skill 19.04 Exercise 1** | |
| For each of the following indicate what is printed as the output. If an error occurs, indicate the error. | |
| **Code** | **Output** |
| var x = 10  var y = x  x = y  console.log(y) |  |
| var x = y = z = 5  console.log(x)  console.log(y)  console.log(z) |  |
| var a = 5  console.log(a)  var b = 10  console.log(b)  var c = a  console.log(c)  a = b  b = c  console.log(a)  console.log(B) |  |
| var score = 10;  var score = 5;  var score = 11;  console.log(score) |  |

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| **Skill 19.05 Exercise 1** | |
| Indicate what is printed for each of the following. If an error occurs, indicate the error and why. | |
| var x = 2  var y = 3  var z = x + y  x = x + z  console.log(x+1) |  |
| var x = 1  var y = 5  var z = x - y  x = x - z  console.log(x-1) |  |
| var x = 2  var y = 3  var z = x \*\* y  x = x \* z  console.log(x\*2) |  |
| var x = 9  var y = 3  var z = x/y  x = x/z  print(x/3) |  |
| var x = 11  var y = 3  var z = x%y  x = x%z  print(x%2) |  |

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| **Skill 19.06 Exercise 1** | |
| What type of data is stored in each of the variables below? | |
| var a = 10; |  |
| var b = "hello!"; |  |
| var x = "5" + "5"; |  |
| var z = 5 \* 5 + "2" |  |
| var c = true; |  |
| var d = [1, 2, 3, 4, 5] |  |
| var e = 3.14; |  |

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| **Skill 19.07 Exercise 1** |
| Write code to   1. Concatenate two strings 'Hello' and 'World' inside a console.log statement 2. Concatenate the strings 'Hello' and 'World' inside a console.log statement, but make sure to use string concatenation to also include a space (' ') between the two words. |
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| **Skill 19.08 Exercise 1** | |
| Indicate the output of the following | |
| console.log(" Blah "+  5+10 + " Blah Blah " + 5+10); |  |
| console.log(5\*10 + " Blah Blah " + 5\*10); |  |
| console.log(" Blah "+  10-5 + " Blah Blah " + 10-5); |  |

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| **Skill 19.08 Exercise 2** |
| Re-write the code segments below so that they calculate the arithmetic operations |
| console.log(" Blah "+  5+10 + " Blah Blah " + 5+10); |
|  |
| console.log(5\*10 + " Blah Blah " + 5\*10 - 10); |
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| console.log("Blah" + 2/5 + "blah" + 8/2 - 1) |
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| **Skill 19.08 Exercise 3** | |
| Does the code below work as intended? Why or why not? | |
| var x = "5";  var y = "5";  console.log(x + y - 10); |  |

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| **Skill 19.09 Exercise 1** |
| Write code prompt a user for two numbers. Assign the numbers to the variables num1 and num2.  Log the following message to the user, “The difference is [*indicate the value of the num2 – num1*]” |
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| **Skill 19.10 Exercise 1** |
| Re-write the following in pseudocode,  var x = y = z = 5  console.log(x)  console.log(y)  console.log(z) |
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