# JavaScript Variables, Expressions, Data Types

In this assignment, students will continue to use the intro\_js folder they created in class.

## Getting started

1. Continue your work in the index.html file found in the intro\_js.zip file. Simply add on to the bottom of the JavaScript code found in the <script> tag.
2. Using prior code as an example, write an expression that calculate the area of a triangle, given its base and height.
   1. Create a variable called tri\_base and give it a value of 10.
   2. Create a variable called tri\_height and give it a value of 5.
   3. Create a variable called tri\_area and give it the computed value of the triangle’s area, using tri\_base and tri\_height.
   4. Write the following sentence to the console log, using the three variables used in previous steps:   
        
      The area of the triangle with a base of 10 and a height of 5 is 25.00
   5. Notice that the area was rounded to two decimal places using the toFixed method. Be sure to replicate this outcome.
3. Continue working in the same file. Make two new variables, one to hold a person’s height in inches, and another to hold their weight in pounds. Use JavaScript to compute the person’s Body Mass Index (BMI) using those two variables.

Note that:

* The BMI formula is 703 x (weight in pounds) / (height squared)
* Convert the answer to a string, and round to one decimal place.
* Express your answer as a sentence, written to the console log, as follows:

A person 70 inches tall who weighs 170 pounds has a BMI of: 24.4

1. Continue working in the same file. Make some more variables. You will need a variable named heightFeet and another called heightInches. Use these in a new, slightly different, formula that calculates BMI. Perform all the same data type conversions that you did previously in step 3. When you are done you should be able to assign 5 to heightFeet and 2 to heightInches and generate a new sentence that looks like this:  
     
   A person 5 feet 2 inches tall who weighs 170 pounds has a BMI of: 31.1
2. Upload your work. Be sure that you can find your work on the class server by typing in its URL in the browser.   
     
   For example: http://misdemo.temple.edu/tux99999/intro\_js

**Continued**

How will this assignment be graded?

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| Item | Point Value |
| Uploaded OK? (solution must be ***exactly*** where requested!) | 10 |
| Does all the “in class” material appear to be correct? (Area of a square, perimeter of a square, Fahrenheit to Celsius) | 30 |
| Area of triangle computed correctly? | 10 |
| Area of triangle expressed in sentence, with rounded answer? | 10 |
| First BMI computed correctly? | 10 |
| First BMI expressed in sentence, with rounded answer? | 10 |
| Second BMI computed correctly? | 10 |
| Second BMI expressed in sentence, with rounded answer? | 10 |