

JavaScript - DOM Scripting

Assignment 30%

Submit: A Zipped Folder with your Student Number and Name

Date: Week Starting 12th of April

You are required to create a web site help students in developing their mathematically ability. Requirements for this site include

1. A minimum of 3 pages
2. Your website must be uploaded to your server account and must be responsive.
3. A text file containing this URL must be saved to your root folder.
4. The root folder must be zipped and submitted to Moodle via this link. Use a template from the W3 School
http://www.w3schools.com/w3css/w3css_templates.asp
5. Pages must be validated where possible
6. All numerical answers must be fixed to two decimal places
7. Ensure to check that all values entered are numerical
8. Use alerts to notify the user of any special requirements
9. Use textfields, buttons, checkboxes & radio buttons to allow the user to perform calculations
10. DOM Scripts must be in an external file

Include the following mathematical operations:

- Addition, subtraction, multiplication and division of numbers
- Absolute difference of numbers
- Min and max of a sequence of numbers entered by the user
- Factorial - Max number allowed is 20 for this operation
- Times tables
- Quizzes with random generation of questions
- Unit conversions
 - Mass
 - Distance
 - Speed
- Include other functionality that is omitted from this document that you feel is necessary

In this project you must show you knowledge of functions, loops and data input/output. You may use the screenshots on the following pages as a guide only.

Fraction Calculator

Decimal: 2 ▼

$$\frac{7}{4} \div \frac{2}{6} = \frac{42}{8}$$

Correct

Another Check

Well done you got it right.

$$\frac{42}{8} = 5.25$$

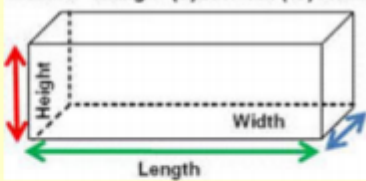
Try another one

Volume Calculator (cm³)

☒ Tank ☐ Cylinder ☐ Sphere

Length (cm) Width (cm) Height (cm) Radius (cm)

Volume = Length (L) x Width (W) x Height (H)



Reset Calculate

The volume of this tank is 1000.00cm³

Mathematics Study Aid

Enter First Value

Enter Second Value

6.36

20

Calculate

6.36 + 20

26.36

6.36 x 20

127.20

6.36 ÷ 20

0.32

|6.36 - 20|

13.64

6.36 ! =

720

20 ! =

2432902008176640000

6.36 Times Tables

20 Times Tables

1 x 6.36 = 6.36
2 x 6.36 = 12.72
3 x 6.36 = 19.08
4 x 6.36 = 25.44
5 x 6.36 = 31.80
6 x 6.36 = 38.16

1 x 20 = 20.00
2 x 20 = 40.00
3 x 20 = 60.00
4 x 20 = 80.00
5 x 20 = 100.00
6 x 20 = 120.00
7 x 20 = 140.00
8 x 20 = 160.00
9 x 20 = 180.00
10 x 20 = 200.00
11 x 20 = 220.00
12 x 20 = 240.00
13 x 20 = 260.00
14 x 20 = 280.00
15 x 20 = 300.00
16 x 20 = 320.00
17 x 20 = 340.00
18 x 20 = 360.00
19 x 20 = 380.00
20 x 20 = 400.00