Part 2: \( E = mc^2 \)

Element chosen from periodic table: ______________________

To calculate the amount of energy released when the nucleons of a nuclide come together, I can use the equation:

\[
E = mc^2
\]

In the equation \( E = mc^2 \) the variables stand for:

- \( E \) = 
- \( m \) = 
- \( c \) = 

To solve for \( m \) I need to know:

1. 
2. 

To get \( m \), I subtract the total mass of the ________ from the total mass of the individual __________.

Calculate the \( m \) using the information from the nuclide you built in the previous worksheet:

Show work below:

The term for this value is:

To convert the mass defect from amu to kg, I need to use the following conversion:

\[
1 \text{ amu} = 1.661 \times 10^{-27} \text{ kg}
\]

When I convert amu to kg for my nuclide I get (show all work): 

Name: ______________________