



Lesson 3 Triangle Area Calculator

Worksheet

K-W-L Chart

What I Know	What I Wonder	What I Learnt

New Commands: make a list of all the new Python commands you learn throughout the lesson



Activity 1:

Read and run the program.

```
1. print("Triangle Area Calculator")
2.
3. a = float(input("Value of side a:(centimetre) "))
4. b = float(input("Value of base b:(centimetre) "))
5. c = float(input("Value of side c:(centimetre) "))
6.
7. s = (a + b + c) / 2
8.
9. area = (s * (s-a) * (s-b) * (s-c)) ** 0.5
10.
11. print("The area of this triangle is", area, "square centimetres.")
```

Length A	Length B	Length C	Semi - Perimeter	Area

Questions:

- Why is **'float()'** used together with **'input()'**?
- How can the program remember the values of three sides of a triangle?
- How to calculate the semi-perimeter by using Python?
- How to calculate the area by using Python?
- Look at **Line 11**. Do you notice anything different?

**Activity 2:**

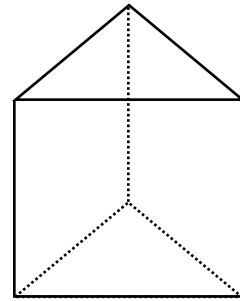
Create another Triangle Area Calculator that calculates the area of a triangle with the given base and height.

- **Formula:** $Area(A) = \frac{base \times height}{2}$

Activity 3:

Based on the program for Triangle Area Calculator, create a Triangular Prism Volume Calculator.

- **Formula:** $Volume = area\ of\ base\ (triangle) \times Height$

**Activity 4:**

Create an application to calculate the capacity of a milk carton. Convert your calculated volume from units of cubic centimetres to litres.

Extension:

Create a calculator application that can calculate the perimeter and area of a learnt plane shape or the volume of a learnt prism or prism-like figure.