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Q7. Help function: → provides documentation.

It is used as help (math).

It gives the entire detail about any library or function info called inside the help.

It gives the code of the lib or function called from scratch.

Q6. PEMDAS

P: Parenthesis
E: exponents
M: Multiply
D: Divide
A: Add
S: Substract

It is used from left to right as a priority, for doing the arthimatic operations.

Q5.

```
import math
a = math.pi
print (a)
```

→ gives 3.14....

When we import a lib, we can use all the functions built in that library. Without importing, functions cannot be used.

Q4. Built-in functions in python are pre-defined functions provided by the python language that can be used to perform common tasks

abs() → Return the absolute value of a number

hup() → Display the documentation of modules, functions, classes, keywords etc.

print() → Print output to the console

pow() → Compute the power of a number

open() → open a file and returns its object.

Q3. Object-Oriented Programming (OOP) is a way to design programs by using objects. An object is like a real-world thing that has properties (data) and actions (functions).

Key Concept:

1. Encapsulation: Keep data and actions inside a box (object), only allowing limited access.
2. Abstraction: Focus on important details, hiding the complexity.
3. Inheritance: Share common traits among related objects.

4. Polymorphism: One action works differently depending on the object.

Programming Languages using OOP:

1) C++ 2) Java 3) Python 4) C # 5) Ruby.

Key Differences:

1) C++ offers manual memory management and low-level control, suitable for performance-critical tasks.

2) Java emphasizes portability with its JVM but is verbose compared to python.

3) Python is flexible and beginner friendly but slower for large applications.

4) C# is tightly integrated with Windows ecosystems and is widely used in gaming (Unity).

5) Ruby is focused on simplicity, often used in web frameworks like Rails.

Q2.

A compiled language is converted into machine code so that the processor can execute it. An interpreted language is a language in which the implementations execute instructions directly without earlier compiling a program into machine language. The compiled programs run faster than interpreted programs.

Q1. Features of python that made it popular:

1) Simplicity and Readability.
2) Versatility
3) Extensive Libraries and Frameworks.
4) Dynamic typing
5) Large community support.

Flaws of python:

1) Performance Issues
2) Higher memory Uses
3) Weak in Mobile Dev
4) Runtime Errors
5) Not Ideal for low-level programming.