## Introduction to Programming

## **Exercises**

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Prior to attempting these exercises ensure you have read the lecture notes and/or viewed the video, and also completed the practical. You may wish to use the Python interpreter in interactive mode to help work out the solutions to some of the questions.

Download and store this document within your own filespace, so the contents can be edited. You will be able to refer to it during the test in Week 6.

Enter your answers directly into the highlighted boxes.

For more information about the module delivery, assessment and feedback please refer to the module within the MyBeckett portal.

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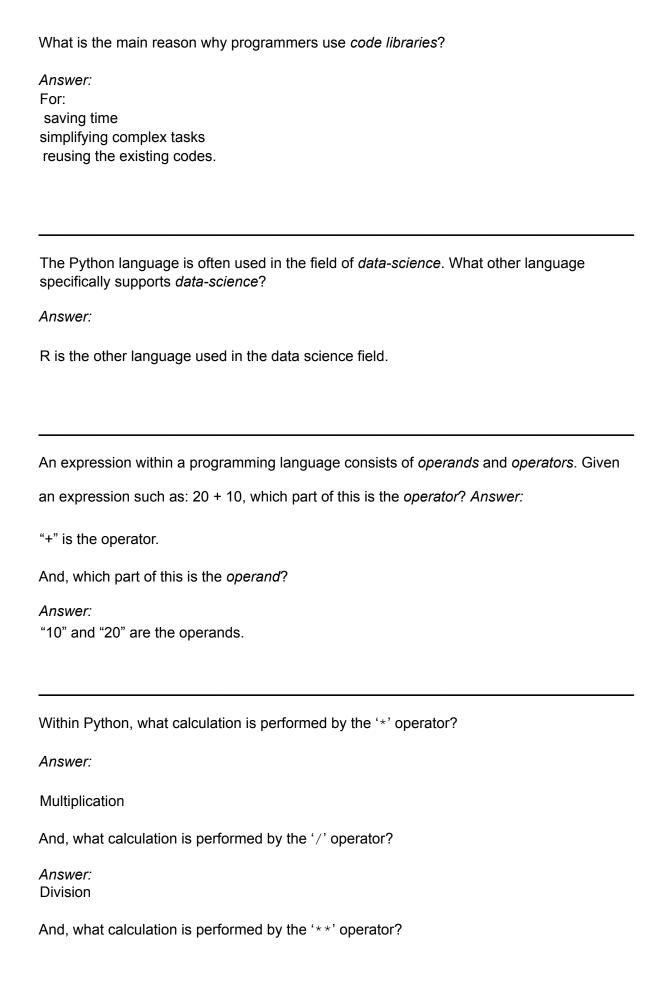
What is the name of the programming language that we will be using on this module? What

version of the language are we using?  Answer:					
Python is the programming language that is used in this module. The version being used is					
3.10 and above					
A computer program takes some <i>input</i> , performs some <i>processing</i> then what?					
Answer:					
Produces the output					
What generation of programming language is machine code?					
Answer:					
Machine code is the First generation programming language.					
Which of the following is known as a second generation programming language?					
• C++					
Java     Assembly					
<ul><li>Assembly</li><li>R</li></ul>					
• Python					
Answer:					
Assembly					
State one problem associated with writing code in Assembly Language. <i>Answer:</i>					

lAssembly language is low level and platform-specific, making it less portable and

harder to maintain.

What generation of programming language is <i>Python</i> ?					
Answer:					
Python is 4th generation programming language,					
What is the purpose of a <i>compiler</i> ?					
Answer:					
The purpose of a compiler is to translate high level programming code into machine code or lower level code that can be executed by computer.					
The Python interpreter uses an interaction model called <b>REPL</b> . What does this stand for?	_				
Answer:					
Read-Eval Print Loop					
Is it true that Python development always has to take place using <i>interactive-mode</i> within the Python interpreter?	— the				
Answer: It is not true because python programs can also be written in source code files and be executed.					
What does the term IDE stand for?					
Answer:					
Integrated Development Environment					



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## Exponentiation

Using the information about expression evaluation provided in the related tutorial, evaluate each of the following expressions **in your head** and type the result in the answer boxes below. Remember that an operator precedence is applied, but can be overridden by the use of parentheses.

```
a) 100 + 200 - 50
```

Answer:

250

```
b) 10 + 20 * 10
```

Answer:

210

```
c) 20 % 3
```

Answer:

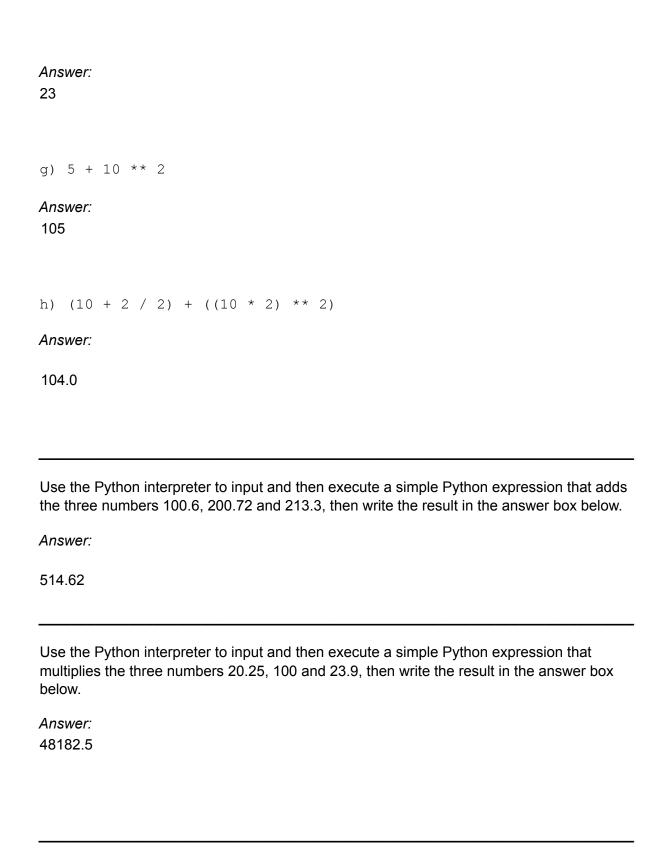
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Answer:

2.0

Answer:

50.0



Use the Python interpreter to input and then execute a simple Python expression that divides the number 10 by 0, then write the result in the answer box below. *Answer:* 

Zero Division Error

What type of error is typically easier to identify? A syntax error? Or a logical error? Answer:
Syntax errors are easier to identify because they are detected by the compiler during the code compilation or execution process.
What type of message is used by the Python interpreter to report run-time errors? Answer:
Python uses run-time errors to report issues during program execution
What command can be used to exit the Python interpreter?
Answer:
We can use the command (delete) or 'Ctrl+D'

## **Exercises are complete**

Save this logbook with your answers. Then ask your tutor to check your responses to each question.