

Oxford Revise | OCR Computer Science | Answers

Chapter 21 Selection structure

Question	Answer	Extra information	Marks	AO / Specification reference								
1	<table border="1"> <thead> <tr> <th>Operator</th> <th>Purpose</th> </tr> </thead> <tbody> <tr> <td>></td> <td>Greater than</td> </tr> <tr> <td>!=</td> <td>Not equal to</td> </tr> <tr> <td><=</td> <td>Less than or equal to</td> </tr> </tbody> </table>	Operator	Purpose	>	Greater than	!=	Not equal to	<=	Less than or equal to	<p>1 mark for each correct answer up to 3 marks.</p> <p>The shaded area is given in the question.</p>	<p>1</p> <p>1</p> <p>1</p>	<p>AO1</p> <p>2.2.1</p>
Operator	Purpose											
>	Greater than											
!=	Not equal to											
<=	Less than or equal to											

Question	Answer	Extra information	Marks	AO / Specification reference
2	<pre> number = input("Input a whole number") if number/2 == number DIV 2 then print(number + " is even") else print("The number you entered is not even") endif </pre>	<p>Marking points:</p> <ul style="list-style-type: none"> • An input to an appropriate identifier • An input prompt, either as part of the input statement, or as a standalone print statement • if ... then ... else ... endif seen • Correct comparison seen in the if statement • Appropriate output message, including the input number, if number is even • Appropriate alternative message if number is not even. The input number does not need to be repeated in this statement. 	<p>1 1 1 1 1 1</p>	<p>AO3 2.2.1</p>

<p>3</p>	<pre> graph TD Start([START]) --> Input[/input number/] Input --> Decision{Number >= 50} Decision -- Yes --> Output1[/output "The number is 50 or more"/] Decision -- No --> Output2[/output "The number is less than 50"/] Output1 --> End([END]) Output2 --> End </pre>	<p>Marking points:</p> <ul style="list-style-type: none"> • Start, End, and all boxes connected together • Correct input • Correct decision box and content, with true or false routes identified • Correct outputs. 	<p>1 1 1 1</p>	<p>AO3 2.2.1</p>
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Question	Answer	Extra information	Marks	AO / Specification reference
4	<pre> number = input("Enter a whole number between 1 and 4, inclusive") switch number: case 1: print("+") case 2: print("-") case 3: print("*") case 4: print("/") default: print("You have entered an incorrect number") endswitch </pre>	<p>Marking points:</p> <ul style="list-style-type: none"> • Input with an appropriate prompt • Correct check for input of 1 • Correct output for input of 1 • Correct check for other allowed inputs (2, 3, 4) • Correct output for inputs of 2, 3 or 4 • Correct error message if anything other than 1 to 4 is entered. <p>Note: The solution shown uses a switch statement. An alternative, such as a nested If would also be acceptable, unless the question says otherwise.</p>	<p>1 1 1 1 1 1</p>	<p>AO3 2.2.1</p>