
GCSE to A-Level

Baseline Assessment

50 Marks

Zoe also wants to play multiplayer games via the Internet, however she finds that her connection is very slow in her room.

- c. Explain two ways that Zoe might be able to increase the speed of her connection so that her online gaming experience is better

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..... [6]

3.

Complete the truth table for the following expression:

A OR (B AND C) [4]

A	B	C	B OR C	A AND (B OR C)

Draw a circuit to represent the expression [2]

4.

Calculate the following:

a. 17 MOD 4

.....[1]

b. 17 DIV 4

.....[1]

c. 0011 0101 + 0100 1101

.....[2]

5. Convert the number 240 into hexadecimal

.....[2]

7. You are given the following list of prices, stored in an array called Prices.

3.24	4.80	5.60	7.99	2.99	8.50	4.99	5.10
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a. Write an algorithm to calculate the average price of all the items over £5

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b. Explain two tests that you would need to carry out to ensure that the algorithm was working correctly.

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8. A function is defined as follows:

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function sequence(n)
  while n != 1:
    output n
    if n MOD 2 == 0 then
      n = n DIV 2
    else
      n = 3*n + 1
    end if
  end while
  output n
```

Write down the output from calling sequence(3)

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..... [2]