

008 An algorithm a day...

Algorithm Question

Source: OCR GCSE Computing Exam June 2013

An isosceles triangle is one which has at least two equal length sides.

Write an algorithm which:

- Asks the user to enter the lengths of a triangle
- Works out if the triangle is isosceles
- Outputs a message stating whether the triangle is isosceles or not.

[5 marks]

Algorithm Example Answer

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*****There are always different ways to solve a problem. This algorithm is just an example. What is important is that the logic is correct!*****

LOGIC:

- **Inputting three lengths & cast to integer type**
- **Comparing lengths in pairs**
- **... for all three ways correctly**
- **... outputting "Isosceles" for all valid cases**
- **... outputting "Not Isosceles" for all cases and only in cases where the three lengths are different.**

EXAMPLE ALGORITHM:

```
length1 = int(input("Enter first length: "))
length2 = int(input("Enter second length: "))
length3 = int(input("Enter third length: "))
if length1 == length2 then
    print("Isosceles")
elseif length1 == length3 then
    print("Isosceles")
elseif length2 == length3 then
    print("Isosceles")
else
    print("Not Isosceles")
endif
```