008 An algorithm a day…

Algorithm Question

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

Write an algorithm in pseudocode 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**
- **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:

```
INPUT Length1, Length2, Length3
IF Length1 = Length2 THEN
    Output "Isosceles"
ELSE
    IF Length1 = Length3 THEN
        Output "Isosceles"
    ELSE
        IF Length2 = Length 3 THEN
            Output "Isosceles"
        ELSE
            OUTPUT "Not Isosceles"
        END IF
    END IF
END IF
```