**Digital Technologies Department**



91075 Algorithms Assessment (Internal)

Context and issue

Design a program to do the following:

For a kite building competition, a triangle has to be cut from a specified size of material. For any number of triangles, the user of the program keys in three lengths for the three sides of a triangle. Input is terminated with a length of -1 for the first side.

After the data for a triangle is entered, the user is given a menu of the following options for that triangle.

[P]: Perimeter of the triangle

[A]: Area of the triangle

The user selects an option by typing in a P or A, and the result of the option is displayed before the data for the next triangle is entered. The sides of the triangle are limited to a maximum of 100cm

*Hint*:

The perimeter of a triangle is the sum of the three sides

Use the following formula to determine the area of the triangle – calculated on the three sides.

Area =  where s = half the perimeter