

Past Exam Paper Question

Use *Heron's Formula* to calculate the area of a triangle given the length of the 3 sides

The diagram below illustrates the general formula where S represents the semi-perimeter of the triangle.

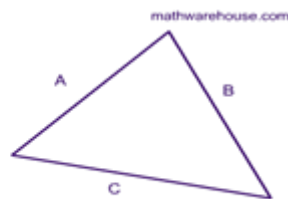
(S is found by summing the 3 sides and dividing by 2).

The area can then be calculated by finding the square root of $s * (s - a) * (s - b) * (s - c)$ as shown below.

Heron's Formula

$$S = \frac{A + B + C}{2}$$

$$\text{Area} = \sqrt{S(S - A)(S - B)(S - C)}$$



Write a method that will calculate and return the area of a triangle using *Heron's Formula*. The method should accept the length of the three sides as input. Use the method from the Math class to calculate the square root. (`Math.sqrt(double d)`)