Exercise 9

Express the area and perimeter of an equilateral triangle as a function of the triangle's side length x.

Solution

$$\text{Perimeter:} \quad P = x + x + x = 3x$$

$$\text{Area:} \quad A = \frac{1}{2}bh = \frac{1}{2}(x)(x\sin 60°) = \frac{\sqrt{3}}{4}x^2$$