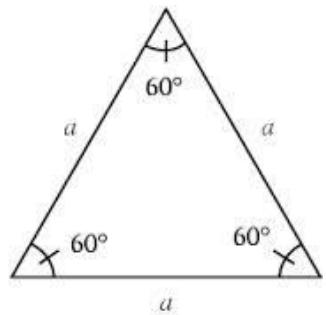


Answer on Question #40080 – Math - Geometry

the area of a regular polygon is 36 inches squared. Find the length of a side if the polygon is a triangle

Solution

By regular triangle we mean an equilateral triangle .



Denote

a=length of a side,

$$\text{Area} = \frac{a^2 \sqrt{3}}{4}.$$

$$\text{Then } a = \sqrt{\frac{4 \cdot \text{Area}}{\sqrt{3}}} = \sqrt{\frac{4 \cdot 36}{\sqrt{3}}} \approx 9.12 \text{ (in)}$$

$$\text{Answer: } a = \sqrt{\frac{4 \cdot \text{Area}}{\sqrt{3}}} \approx 9.12 \text{ (in)}$$