

Ask Math Anything

Study at Home with Po-Shen Loh

4 July 2020

Abstract

Professor Po-Shen Loh solves problems on his YouTube channel. A selection for practice.

Reference: [Ask Math Anything - Daily Challenge with Po-Shen Loh](#)

A Triangle Puzzle

A triangle has side lengths 7, 7, and x . Its area is the same as a different triangle with sides 7, 7, and 10. Find x .

Hint 1: Area of a triangle:

$$\text{Area} = \frac{1}{2} \times \text{base} \times \text{height}$$

Hint 2: Heron's Formula:

$$\text{Area} = \sqrt{s(s-a)(s-b)(s-c)}$$

where a , b , c are the lengths of the three sides of the triangle, and s is the semi-perimeter,

$$s = \frac{a+b+c}{2}$$