

Ritangle

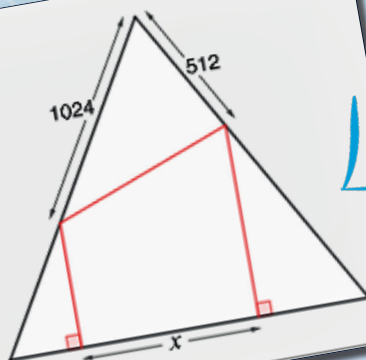
2022



A competition designed for teams of students aged 16-18 who are currently studying either A level Mathematics, the International Baccalaureate or Scottish Highers.

The diagram shows an equilateral triangle with some lengths labelled.

Find x



Enjoy questions like this?

Then gather some friends and be one of the teams pitting their mathematical wits against each other in this year's Ritangle competition!

Luke wrote down this equation, in variables x and z , on a piece of paper;

$$\frac{x-1}{9} - \frac{6}{z} = 1$$

He then turned his piece of paper through 180° , revealing a second equation in variables x and z . He decided to solve the two equations together as a pair of simultaneous equations.

If, after doing this, he multiplies all the possible values of x together, what does he get?

Ready to register?
integralmaths.org/ritangle