

Mathematics

Exploring systems of equations

Independent Task

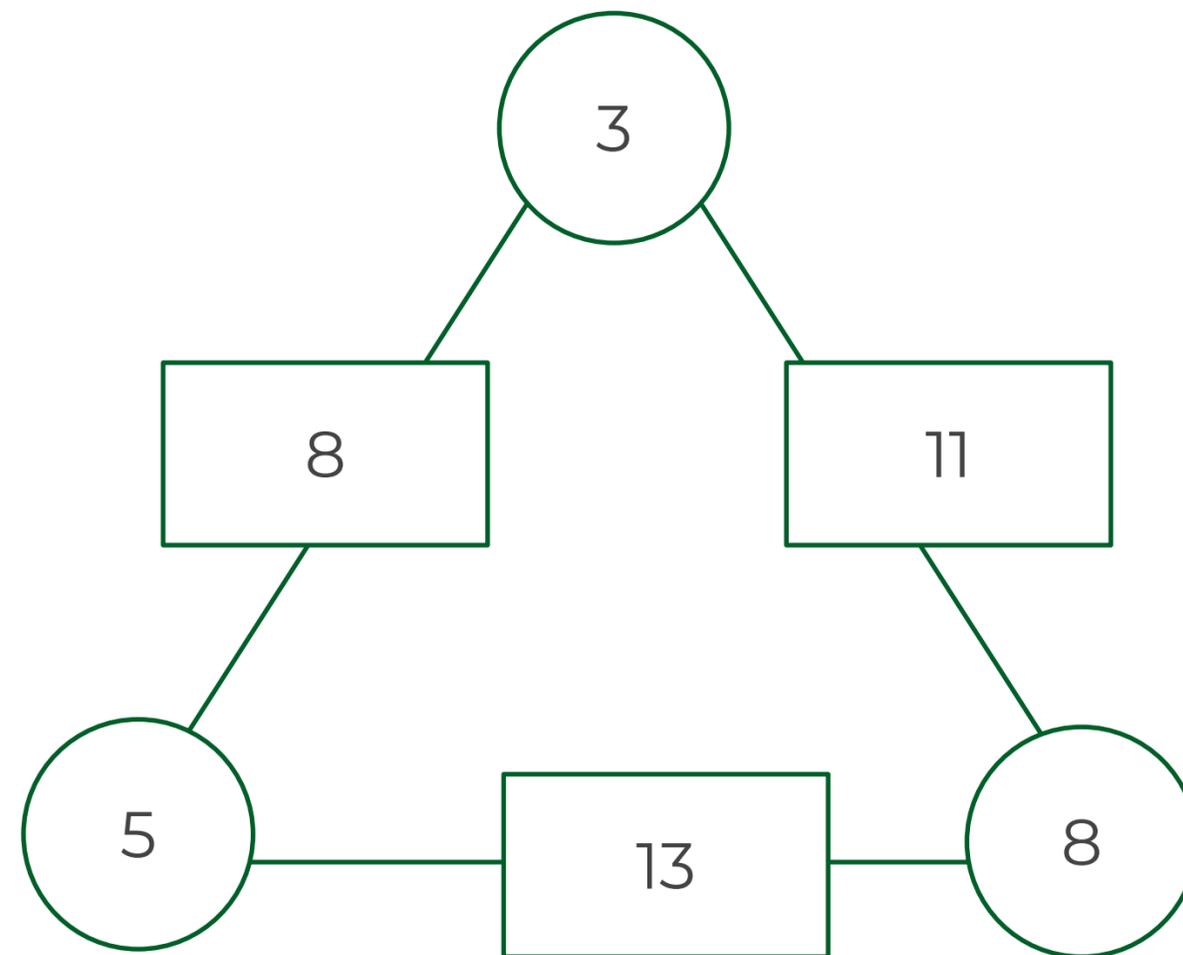
Ms Bridgett



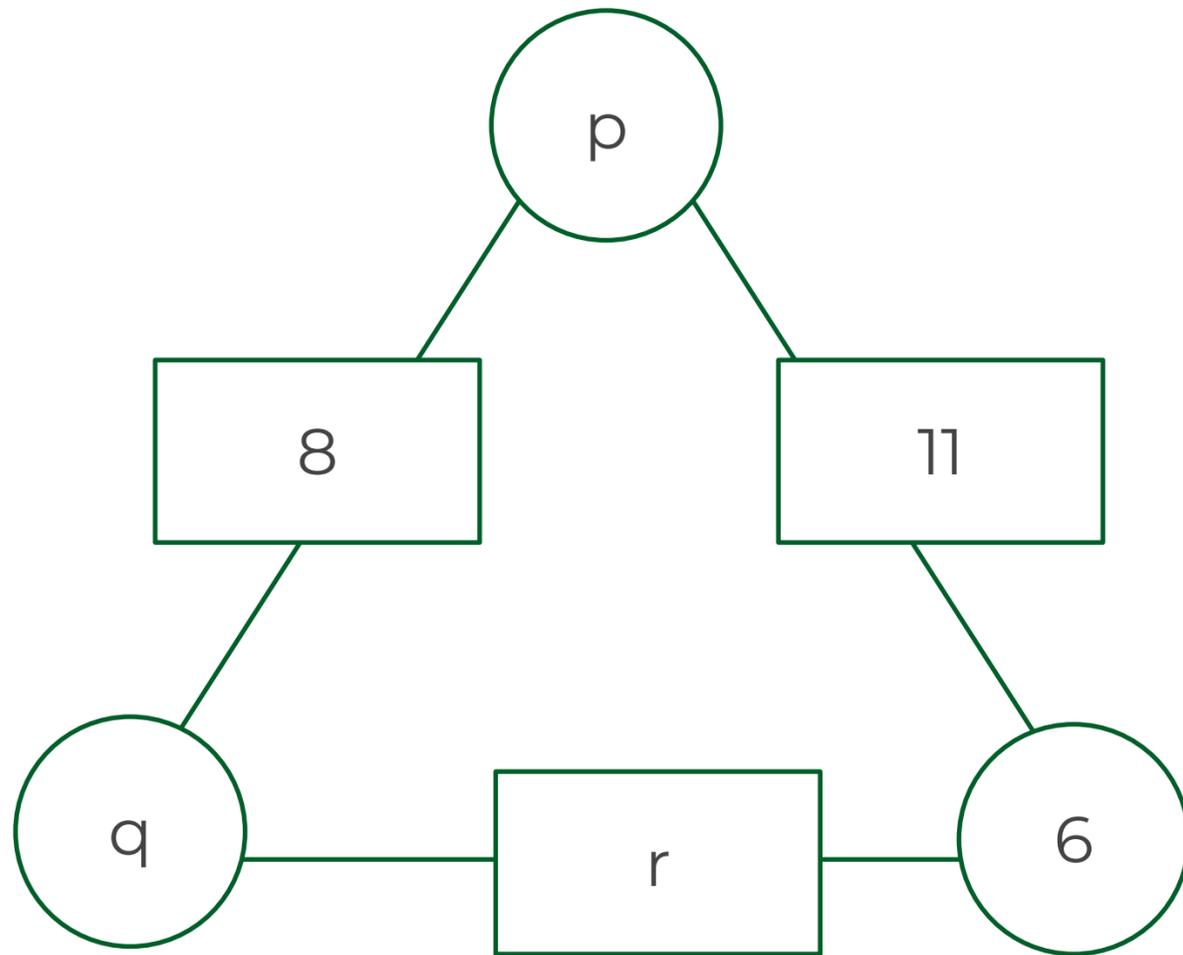
Try this

This shape is called an arithmagon.

Can you work out the connection between the numbers in the circles and the numbers in the rectangles?



Connect



In the last lesson we had more than one unknown.

Here, the unknowns are part of a system.

Each unknown is part of 2 different equations and has to satisfy them both simultaneously.

$$p + q = 8$$

$$p + 6 = 11$$

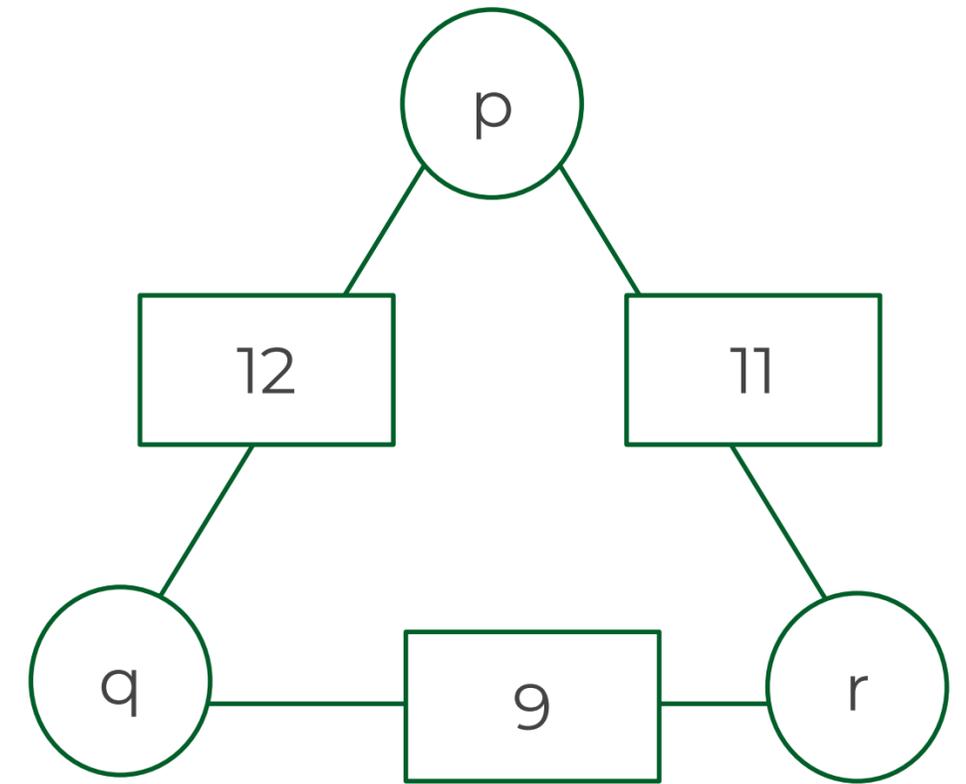
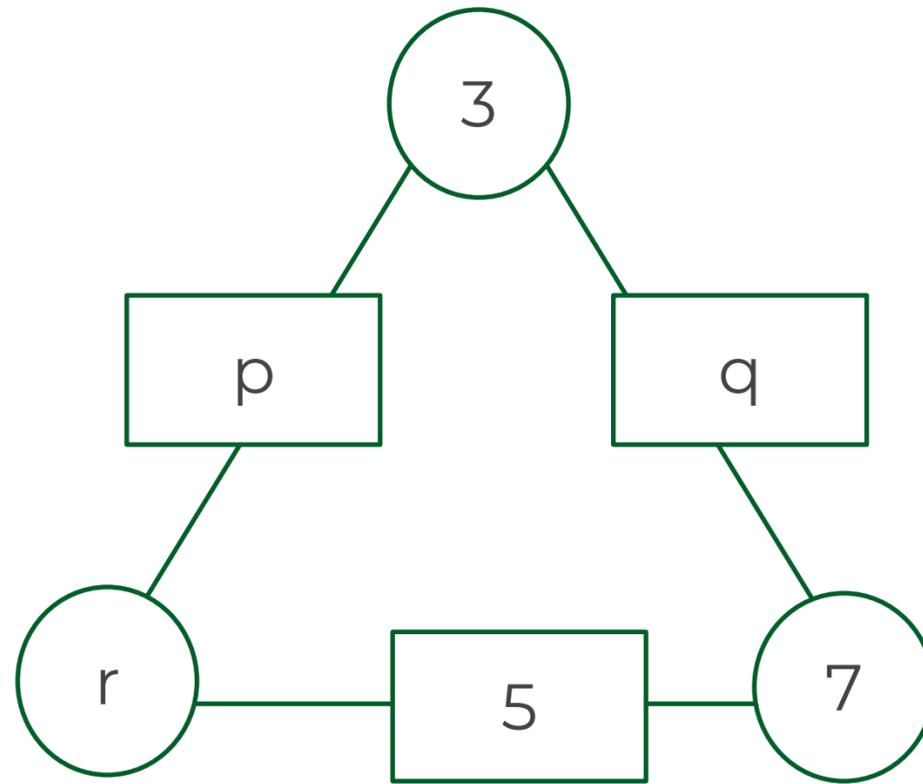
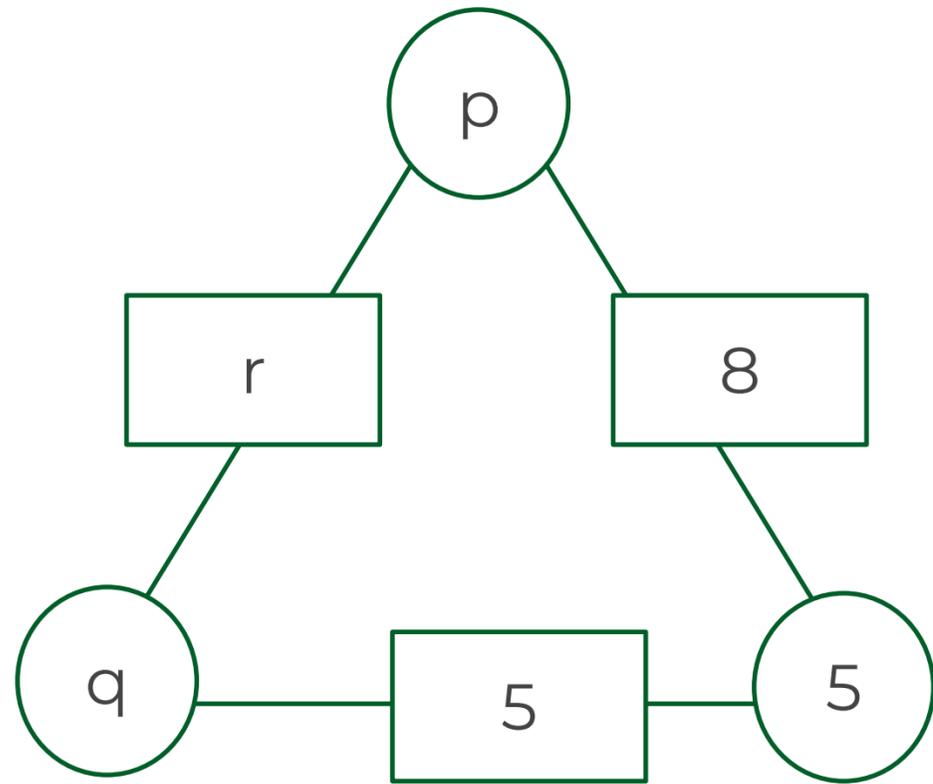
$$q + 6 = r$$

Can you work out the value of the unknowns?



Independent task

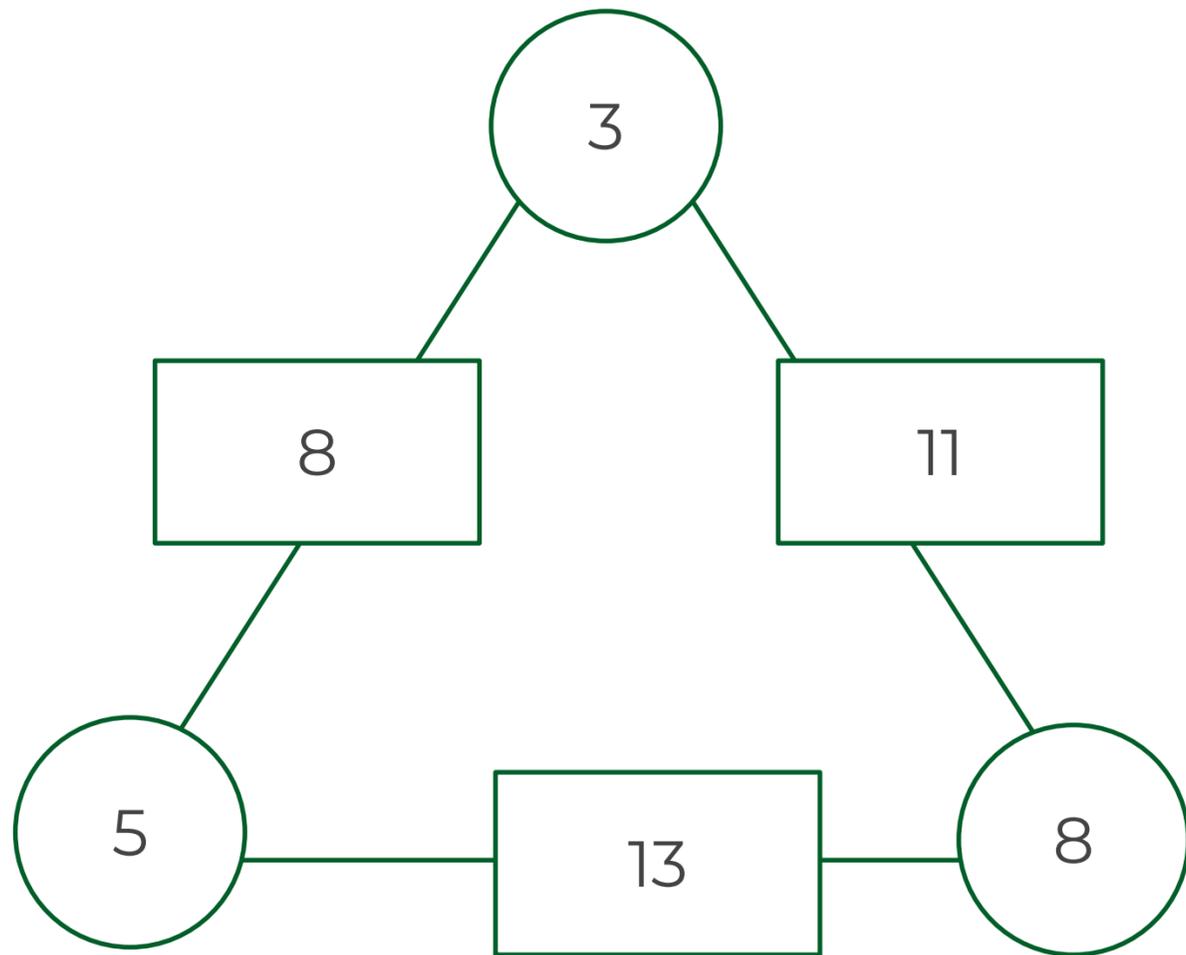
Find the unknowns in the arithmagons:



How many different ways can you find to solve the final arithmagon?



Explore



What happens to the numbers in the rectangles if one of the numbers in a circle is multiplied by 2?

What happens to the numbers in the rectangles if ALL of the numbers in the circles are multiplied by 2?

What happens to the numbers in the circles if the numbers in the rectangles are multiplied by 2? Or 3?

