

## YOHAKU NUMBER PUZZLES

### Background:

A yohaku is a new type of number puzzle that tests students' number sense and problem-solving skills. Each yohaku involves either addition or multiplication (or sometimes both). The aim is to fill in the empty cells such that they give the sum or product shown in each row and column.

### Resource:

A huge collection of Yohaku puzzles problems can be found at the Yohaku website. Visit <https://www.yohaku.ca/>

### Summary:

- Choose one of the many puzzles available through the website
- Display the puzzle for students
- Identify whether the puzzle is additive or multiplicative

		10
		10
7	13	+

Figure: Additive Puzzle 2 by 2 <https://www.yohaku.ca/2-by-2-beginner.html>

- The aim is to fill in the empty cells so they give the sum or product shown in each row and column
- Once students have found a solution have them share the different methods and approaches used with the class

### More Information:

The Yohaku website includes puzzles for students from K-12. The puzzles have been sorted into different categories, including additive, multiplicative, fraction and decimal, and algebraic puzzles. Within each category there are beginner, medium and advanced puzzles. The advanced puzzles include additional criteria, such as, all numbers must be prime or the sum of the cells is equal to 24. You can also access yohaku puzzles via the Twitter handle @YohakuPuzzle.

### Further Reading:

Jacobs, M. (2018). *Yohaku*. Ontario, Canada: CreateSpace Independent Publishing Platform.

Yohaku: A new type of number puzzle. (2019, December) Retrieved from <https://www.yohaku.ca/>