

# Puzzle of the Week

## *Combining Digits – 1 2 4 8*

---

Here are some ways to get 0 and 1 using 1, 2, 4, and 8.

$$0 = 8 - 1 * 2 * 4$$

$$0 = 8 * 1 - 2 * 4$$

$$1 = 8 - 2 * 4 + 1$$

$$1 = 8 - 4 - 2 - 1$$

**THE CHALLENGE:** How many numbers can you get using each of the numbers 1, 2, 4, and 8 in any order, using addition, subtraction, and multiplication?

**EXPLORATION:** What happens with other groups of four numbers? What happens if you use the five numbers: 1, 2, 4, 8, and 16?