

Puzzle of the Week

Fractions – 5

Example: $2/5$ is less than $1/2$, $19/38$ equals $1/2$, and $4/7$ is larger than $1/2$. The difference between $4/7$ and $2/5$ is $(4/7 - 1/2) + (1/2 - 2/5) = 1/14 + 1/10$, which is not particularly small. The fractions $2/5$, $19/38$, and $4/7$ use the digits 1 to 9 at most once each.

THE CHALLENGE: Use the numbers 1 to 9 at most once each to fill in these boxes. Make the difference between the largest and smallest fraction as small as possible.

$$\frac{\square}{\square} < \frac{1}{2}$$

$$\frac{\square\square}{\square\square} = \frac{1}{2}$$

$$\frac{\square}{\square} > \frac{1}{2}$$

1 2 3 4 5 6 7 8 9