

Puzzle of the Week

Fractions – 1

THE CHALLENGE: Use the numbers 1 to 9 at most once each to fill in the boxes. Can you find more than one solution?

$$\frac{\square}{\square} = \frac{\square}{\square} = \frac{\square}{\square \square}$$

1 2 3 4 5 6 7 8 9



Puzzle of the Week

Fractions – 1 – Notes

THE CHALLENGE: To help limit the search, notice that improper fractions can't be used - the rightmost fraction has a value less than 1. Note that 5's can't possibly work anywhere as they would require a 0 or a second 5.

Look for solutions by running through pairs of denominators that would create the two equal single-digit fractions. There are X's next to the ones that don't work out.

- 4 & 8: $1/4 = 2/8$ X; $2/4 = 4/8$ X; $3/4 = 6/8 = 9/12$
- 2 & 8: $1/2 = 4/8$ X
- 6 & 8: $3/6 = 4/8$ X
- 3 & 6: $1/3 = 2/6$ X; $2/3 = 4/6$ X
- 4 & 6: $2/4 = 3/6 = 9/18$

To summarize, there are a total of two solutions:

$$3/4 = 6/8 = 9/12$$

$$2/4 = 3/6 = 9/18$$