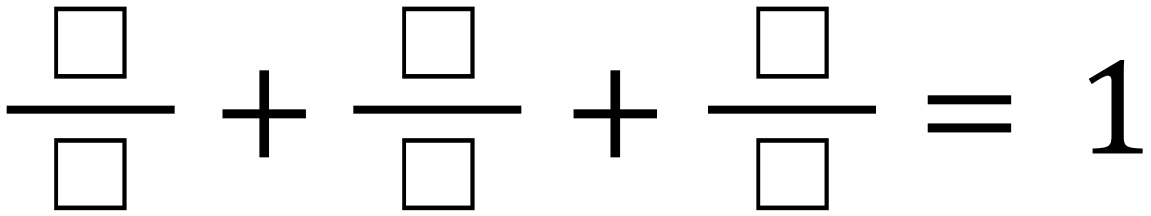
Puzzle of the Week
Fractions – 8

THE CHALLENGE: Use the numbers 1 to 9 at most once each to fill in these boxes. Organize your answers by putting the fractions in increasing size of their denominators. Can you find more than one solution?



1 2 3 4 5 6 7 8 9

EXPLORATION: Can you solve it if 1 is replaced by other numbers, such as 2 or 3? What happens if you insist that the number on the right side of the equation cannot be one of the numbers on the left side?

Puzzle of the Week
Fractions – 8 – Notes

THE CHALLENGE & EXPLORATION: Here are the solutions for 1.

- 1/6 + 4/8 + 3/9 = 1
- 1/4 + 3/6 + 2/8 = 1
- 2/4 + 1/6 + 3/9 = 1

Here are the 9 solutions for 2.

- 1/2 + 3/4 + 6/8 = 2
- 1/2 + 7/6 + 3/9 = 2
- 1/3 + 2/4 + 7/6 = 2
- 1/3 + 7/6 + 4/8 = 2
- 2/3 + 5/6 + 4/8 = 2
- 1/4 + 9/6 + 2/8 = 2
- 5/4 + 3/6 + 2/8 = 2
- 2/4 + 7/6 + 3/9 = 2
- 7/6 + 4/8 + 3/9 = 2

Here are the 13 solutions for 3.

- 2/1 + 3/6 + 4/8 = 3
- 2/1 + 4/6 + 3/9 = 3
- 1/2 + 4/3 + 7/6 = 3
- 1/2 + 6/3 + 4/8 = 3
- 4/2 + 1/3 + 6/9 = 3
- 1/2 + 8/4 + 3/6 = 3
- 1/2 + 7/4 + 6/8 = 3
- 5/2 + 1/6 + 3/9 = 3
- 7/3 + 2/4 + 1/6 = 3
- 1/3 + 8/4 + 6/9 = 3
- 7/3 + 1/6 + 4/8 = 3
- 5/4 + 9/6 + 2/8 = 3
- 9/4 + 3/6 + 2/8 = 3

If the number on the right cannot be one of the numbers on the left, these are the only solutions from the earlier ones that still work.

- 1/3 + 7/6 + 4/8 = 2
- 7/6 + 4/8 + 3/9 = 2
- 1/2 + 7/4 + 6/8 = 3
- 5/4 + 9/6 + 2/8 = 3