

# Puzzle of the Week

## *Turning the Tables*

**THE CHALLENGE:** This started out as a standard multiplication table for the numbers 2 through 9. Then the rows and columns were all mixed up. Finally, most of the numbers have been removed. Put in all the missing numbers!

X								
2								
		40						
				49				
	20					36		
		72						
			9					12
					48			

**EXPLORATION:** Make one of these puzzles for someone else. How many numbers can you leave out and still have a puzzle that can be completely solved?

# Puzzle of the Week

## *Turning the Tables – Notes*

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**THE CHALLENGE:** Start with the easiest rows and columns and work your way from there.

X	5	8	3	7		9		
2								
5		40						
7				49				
4	20					36		
9		72						
3			9					12
					48			

- 49 must be  $7 \times 7$ , so its row and column must be 7.
- 9 must be  $3 \times 3$ , so its row and column must be 3.
- 40 must be  $5 \times 8$ . 40 and 72 are in the same column, so 40 must be in column 8 and row 5
- 72 is in column 8, so it is in row 9.
- 20 must be  $4 \times 5$ . There is already a row for 5, so 20 must be in row 4 and column 5.
- 36 is in row 4, so it is in column 9.
- 12 is in row 3, so it is in column 4.

With that much information, the remaining numbers go very quickly.

- 48 is  $6 \times 8$  and there is already a column for 8, so 48 must be in column 6 and row 8.
- The only remaining row, the one at the top, must be for 6.
- The only remaining column, the one second from the far right, must be for 2.