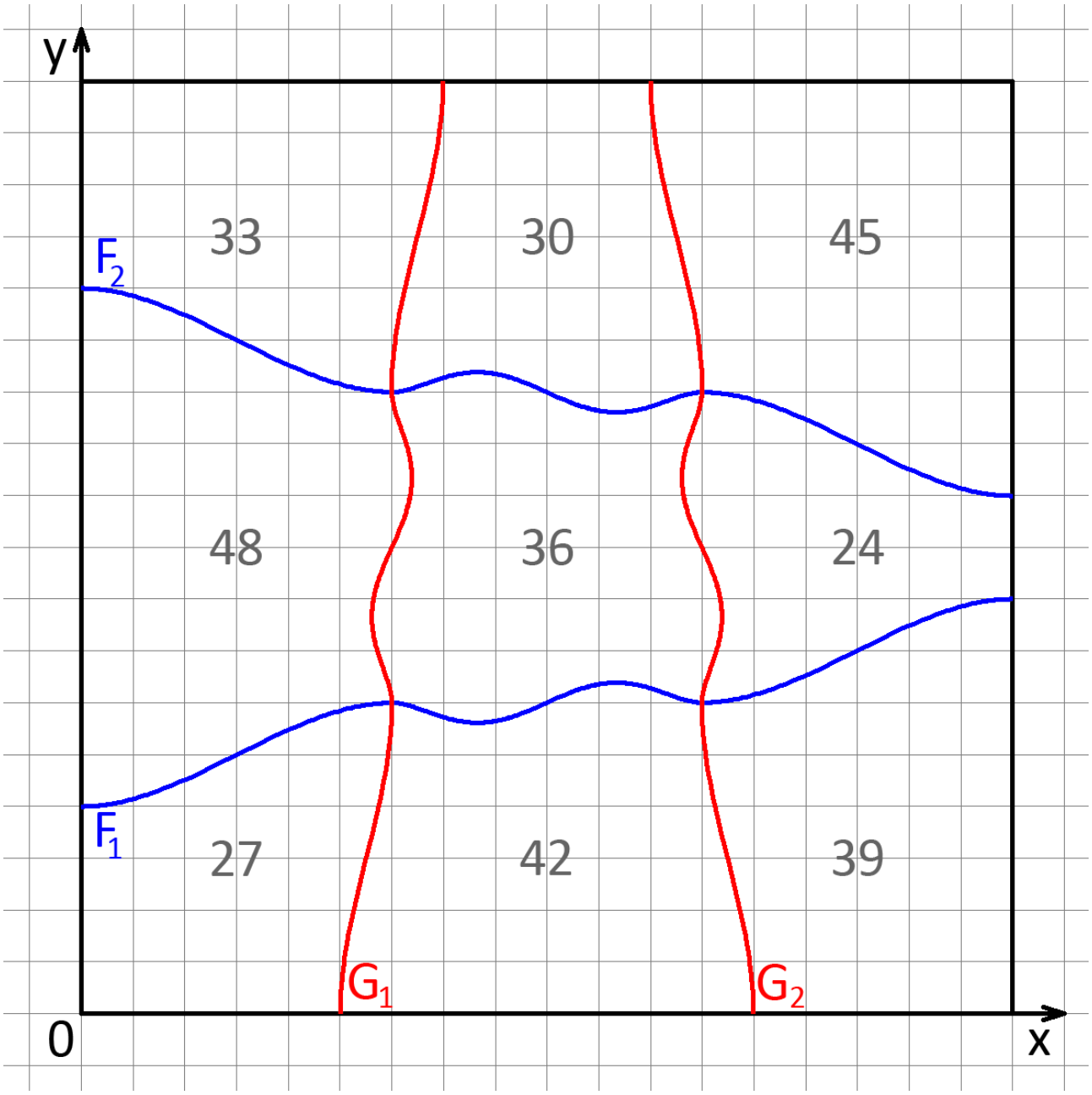
Curved Area Magic Square of order 3

Walter Trump, 2017-02-01



Functions

$$f_1(x) = \begin{cases} h(54,3,5,x) & if\ 0 \le x < 6 \\ j(x) & if\ 6 \le x < 12 \\ h(54,15,7,x) & if\ 12 \le x \le 18 \end{cases} \qquad g_1(y) = \begin{cases} h(108,3,5.5,y) & if\ 0 \le y < 6 \\ j(y) & if\ 6 \le y < 12 \\ h(108,15,6.5,y) & if\ 12 \le y \le 18 \end{cases}$$

$$f_2(x) = 9 - f_1(x) \qquad g_2(y) = 9 - g_1(y)$$

with $h(a, x_0, y_0, x) = \frac{1}{a}(x - x_0)\big((x - x_0) - 27\big) + y_0$

and $j(x) = \frac{1}{180}(9 - x)((9 - x)^2 - 9)^2 + 6$