G1

	1	2	3	4	5	6	7
1	0						
2	1	0					
3	1	0.5	0				
4	0	0.7	1	0			
5	1	0	0	1	0		
6	0	2	8	5	0	0	
7	3	0	3	0	1	0	0

$$\bar{x} = \frac{\sum x}{n} \approx 1.34$$

Excluding self loops

From element count

$(n = 21)$

G2)

	1	2	3	4	5	6	7
1	0						
2	4	0					
3	0.3	0	0				
4	0	9	0	0			
5	0	0.1	6	7	0		
6	0	3	0	0	0.	0	
7	1	0	0.	0.75	0	0	0

$$\bar{y} = \frac{\sum y}{n} \approx 1.48$$

Excluding self loops

From element count

$(n = 21)$

$$\sqrt{\sum_i (x_i - \bar{x})^2} = \sqrt{\begin{array}{l}((1 - \bar{x})^2 + (1-\bar{x})^2 + (0.5 - \bar{x})^2 + (0 - \bar{x})^2 + (0.7 - \bar{x})^2 + \\ (1 - \bar{x})^2 + (1 - \bar{x})^2 + (0 - \bar{x})^2 + (0 - \bar{x})^2 + (1 - \bar{x})^2 + (0 - \bar{x})^2 + (2 - \bar{x})^2 + \\ (8 - \bar{x})^2 + (5 - \bar{x})^2 + (0 - \bar{x})^2 + (3 - \bar{x})^2 + (0 - \bar{x})^2 + (3 - \bar{x})^2 + (0 - \bar{x})^2 + (1 - \bar{x})^2 + (0 - \bar{x})^2)\end{array}}$$

$$= 8.93$$

$$\sqrt{\sum (y_i - \bar{y})^2} = \sqrt{\begin{array}{l}(4 - \bar{y})^2 + (0.3 - \bar{y})^2 + 12(0 - \bar{y})^2 + (9 - \bar{y})^2 + (0.1 - \bar{y})^2 + (6 - \bar{y})^2 + (7 - \bar{y})^2 + (3 - \bar{y})^2 \\ + (1 - \bar{y})^2 + (0.75 - \bar{y})^2\end{array}}$$

$$= 12.10$$

$$\sum (x-\bar{x})(y-\bar{y}) = (1-\bar{x})(4-\bar{y}) + (1-\bar{x})(0.2-\bar{y}) + (0.5-\bar{x})(0-\bar{y}) + (0-\bar{x})(0-\bar{y})$$
$$+ (0.2-\bar{x})(3-\bar{y}) + (1-\bar{x})(0-\bar{y}) + (1-\bar{x})(0-\bar{y}) + (0-\bar{x})(0.1-\bar{y})$$
$$+ (0-\bar{x})(6-\bar{y}) + (1-\bar{x})(4-\bar{y}) + (0-\bar{x})(0-\bar{y}) + (2-\bar{x})(3-\bar{y})$$
$$+ (8-\bar{x})(0-\bar{y}) + (5-\bar{x})(0-\bar{y}) + (0-\bar{x})(0-\bar{y}) + (3-\bar{x})(1-\bar{y}) + (0-\bar{x})(0-\bar{y})$$
$$+ (3-\bar{x})(0-\bar{y}) + (0-\bar{x})(2.75-\bar{y}) + (1-\bar{x})(0-\bar{y})(0-\bar{x})(0-\bar{y})$$

$$= -15.22$$

Pearson coefficient $= \dfrac{-15.22}{8.93 \cdot 12.10} = -0.14$