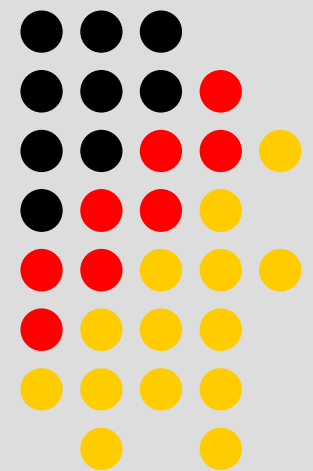
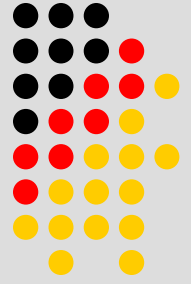


# ANALISIS KORELASI GANDA

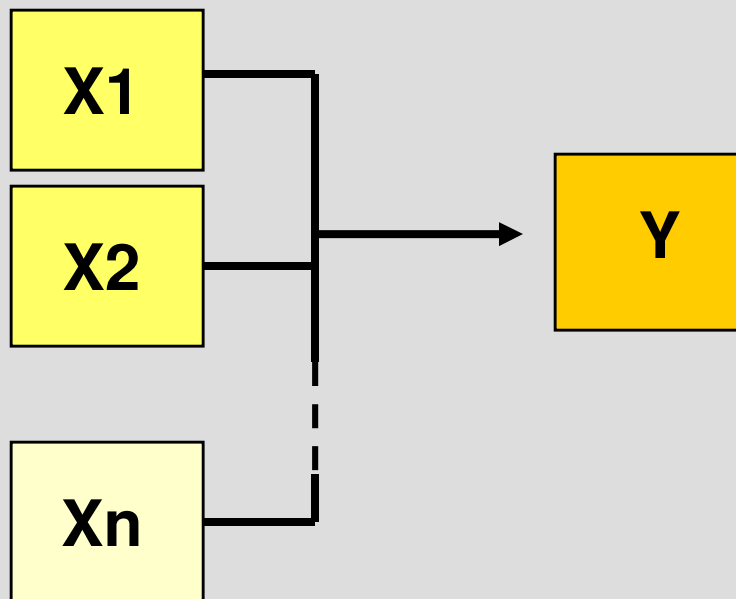
**Fx. Sugiyanto dan Agus Susworo DM.**

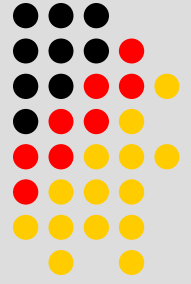




# Konsep

- Hubungan variabel lebih dari 2
- 1 variabel terikat dan 2 atau lebih variabel bebas





# Rumus

1 variabel terikat (Y)

2 variabel bebas (X1 dan X2)

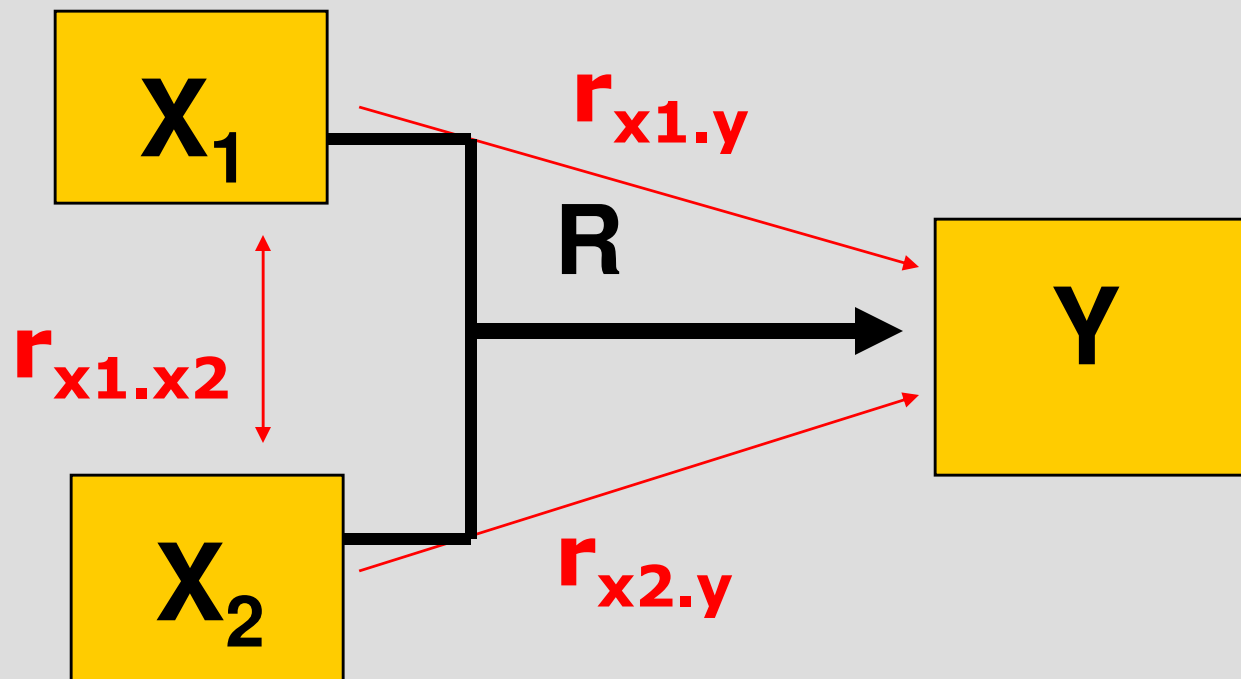
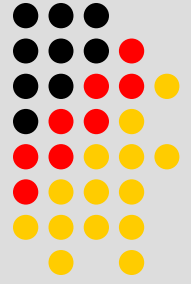
$$R = \sqrt{\frac{(r_{x1.y})^2 + (r_{x2.y})^2 - 2 \cdot (r_{x1.y})(r_{x2.y})(r_{x1.x2})}{1 - (r_{x1.x2})^2}}$$

$r_{x1.y}$  = koefisien korelasi X1 dgn Y

$r_{x2.y}$  = koefisien korelasi X2 dgn Y

$r_{x1.x2}$  = koefisien korelasi X1 dgn X2

# Konsep hubungan



$$R \neq r_{x1.y} + r_{x2.y}$$

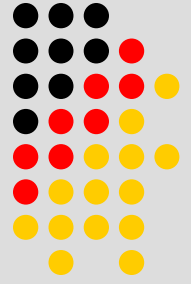
# Contoh

Bagaimana hubungan antara X1 dan X2 secara bersama-sama terhadap Y

| Subyek | X1 | X2 | Y  |
|--------|----|----|----|
| 1      | 10 | 7  | 23 |
| 2      | 2  | 3  | 7  |
| 3      | 4  | 3  | 15 |
| 4      | 6  | 4  | 17 |
| 5      | 8  | 6  | 23 |
| 6      | 7  | 5  | 22 |
| 7      | 4  | 2  | 10 |
| 8      | 6  | 2  | 14 |
| 9      | 6  | 4  | 20 |
| 10     | 7  | 3  | 19 |



# Jawab



- Diperoleh

$$r_{x_1x_2} = 0,7682 \quad r_{x_2y} = 0,7898 \quad r_{x_1y} = 0,9029$$

- Perhitungan

$$R = \sqrt{\frac{(r_{x_1.y})^2 + (r_{x_2.y})^2 - 2 \cdot (r_{x_1.y})(r_{x_2.y})(r_{x_1.x_2})}{1 - (r_{x_1.x_2})^2}}$$

$$R = \sqrt{\frac{(0,9029)^2 + (0,7898)^2 - 2 \cdot (0,9029)(0,7898)(0,7682)}{1 - (0,7682)^2}}$$

$$R = \sqrt{\frac{(0,81523) + (0,62378) - 1,09562}{1 - 0,59013}}$$

$$R = \sqrt{\frac{0,34339}{0,40987}} = \sqrt{0,83780} = 0,9153$$