

## # Numerical 1

Test the independence using R A R B M

11, .23, .45, .08, .11, .50, .09, .60, .81

S<sub>1</sub> Define Hypothesis C  
 $H_0$  &  $H_1$

S<sub>2</sub> Sequence of Runs

- - - - - + + + +  
① ② ③ ④

$$b = 4$$

$n_1 = 3$  (positive or run ~~up~~ above mean)

$n_2 = 6$  (-ve or run below mean)

$$\begin{aligned} S_3: \mu_b &= \frac{2n_1n_2}{N} + \frac{1}{2} \\ &= \frac{2 \cdot 3 \cdot 6}{9} + \frac{1}{2} = 4.5 \end{aligned}$$

$$\sigma_b^2 = \frac{2n_1n_2(2n_1n_2 - N)}{N^2(N-1)}$$

=

$$S_4 \quad Z'_{calc} = \frac{b - u_b}{\sigma_b}$$

$$S_5 \quad Z_{tab} = Z_{0.05} = -1.96$$

## # Numerical

Manchester Partners International claims  
60% of the banking executives who  
lose their job stay in banking.  
Whereas 40% leave banking. Suppose  
40% people who have lost their  
job as banking executive are contacted  
and are asked whether they are  
still banking. The results follow.

Test to determine whether the sample  
appears to be drawn on the basis of  
the sequence of those who left of  
banking & those who have not. Let  
L denote left banking & S denote  
stayed in banking. Confidence be 90%.

S S L S LL S S SSS L SS LLL SSL  
L L L S SL S S SSS S S LL SLS SLS