Results

Participant data

	Younger (16-19)	Older (65+)	Total
Frequency	20	15	35
Percentage (%)	57%	43%	100%

	Male	Female	Total
Frequency	12	22	34
Percentage (%)	35%	65%	100%

Contingency Table showing no of participants giving correct/incorrect no of passes

	Number who correctly counted passes (16)	Number who incorrected counted passes	Total
Younger (16-19)	15	5	20
Older (65+)	8	15	23
Percentage (%)			100%

Contingency Table showing no of participants who saw gorilla / didn't see gorilla

	Saw gorilla	Didn't see gorilla	Total
Younger (16-19)	14	6	20
Older (65+)	7	8	15
Percentage (%)			100%

Contingency Table showing no of participants who saw curtain colour change / didn't see change

	Saw curtain colour change	Didn't see curtain colour change	Total
Younger (16-19)	4	16	20
Older (65+)	3	12	15
Totals	7	28	35

Chi-Square

Contingency Table

Category	Observed value (O)	Expected value (E)	O-E	$(O-E)^2$	$\frac{(O-E)^2}{E}$
16-19 – Saw curtain change	4	4	0	0	0
16-19 – Didn't see curtain change	16	16	0	0	0
65+ - Saw curtain change	3	3	0	0	0
65+ - Didn't see curtain change	12	12	0	0	0

1) Add up all of the values in the final column to get the ChiSquare value.

   The equation for ChiSquare is therefore:

$$\chi^2 = \sum \frac{(O-E)^2}{E} = 0$$

2) You also need to work out a value degrees of freedom – this tells the final look up table you will use about the size of your table. To calculate use:

   df = (number of rows – 1) * (number of columns – 1) = 1

3) We now look up the tabulated value of ChiSquare. If our own value is **higher** than the tabulated value then χ^2 is significant at our chosen significance level (5% usually).

   Look in your table for the following:
   χ^2 = 0 , df = 1, p = 0.05, two tailed test

   What is the tabulated value: 3.84

   Observed/calculated ChiSquare must be ≥ than critical ChiSquare for result to be significant.

   Observed ChiSquare is ***less*** than critical ChiSquare

   So result is significant / **non-significant** at the 5% level.

   The result is written (in Psychology lab reports) as: χ^2= 0, df = 1, p<0.05.

   Conclusion: we must accept the Null Hypothesis. Therer was no statistically significant difference between the number of younger (16-19) and older (65+) people who saw the curtain colour change and those who didn't.

   The majority of participants (28/35) did not notice the curtain colour change.