

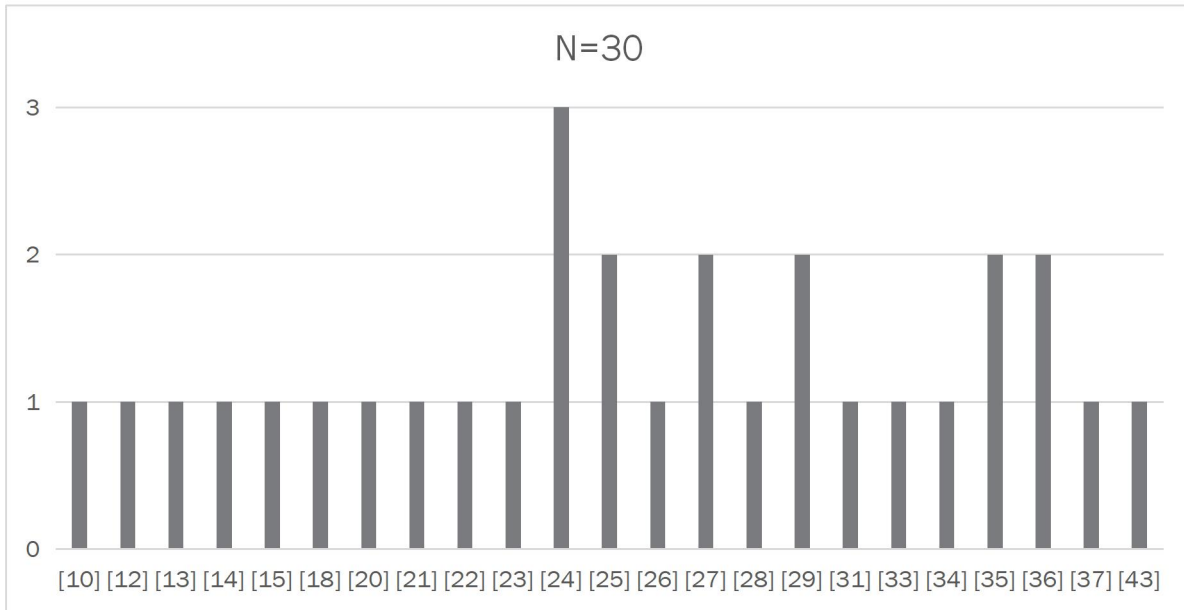
# INSC 2019 Statistics Report

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- 2- Reliability.
- 3- Correlation with standard psychometric batteries & tests by Dr. X. Jouve.
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## 1-Fundamental Statistics.



Mean	25,9
Median	25,5
St. deviation	8,27
Variance	68,39
SEM (raw)	1,51
Skewness	-0,09
Kurtosis	-0,78

## 2-Reliability.

Cronbach's  $\alpha$  is calculated at 0,92. Standardized Cronbach's  $\alpha$  (Spearman-Brown prediction formula) is calculated at 0,93. Further details follow; do note that items were intentionally shuffled so as not to predispose candidates against difficulty of any item (For example, Q1 is not necessarily the first item of the test, it may be any of them - and so on).

Current sample (N=30) is not sufficient for precise estimations. However, sufficient approximations of each item's qualities can be made.

Currently, all items but one have been solved at least once.

C- $\alpha$  exc. : Overall Cronbach's  $\alpha$  if specific item was excluded.

P-BC : Point-biserial correlation.

Solvability : Solvability of an item (N of correct answers/overall N).

DIX : Discrimination index.

Table continues in the next page.

Item	C- $\alpha$ exc.	P-BC	Solvability	DIX
Q1	0,922	-0,18	0,033	-0,1
Q2	0,921	-	1	0
Q3	0,921	-	1	0
Q4	0,921	-	1	0
Q5	0,922	0,07	0,833	0

Q6	0,921	-	1	0
Q7	0,921	-	0	0
Q8	0,92	0,271	0,967	0,1
Q9	0,92	0,18	0,967	0,1
Q10	0,92	0,317	0,967	0,1
Q11	0,921	0,119	0,067	0,1
Q12	0,92	0,391	0,033	0,1
Q13	0,92	0,391	0,033	0,1
Q14	0,919	0,439	0,933	0,2
Q15	0,92	0,357	0,933	0,2
Q16	0,921	0,205	0,167	0,2
Q17	0,921	0,31	0,667	0,2
Q18	0,92	0,265	0,1	0,2
Q19	0,919	0,465	0,067	0,2
Q20	0,919	0,465	0,067	0,2
Q21	0,919	0,452	0,867	0,3
Q22	0,919	0,48	0,167	0,3
Q23	0,919	0,445	0,9	0,3
Q24	0,919	0,476	0,867	0,3
Q25	0,92	0,359	0,167	0,3
Q26	0,919	0,402	0,1	0,3
Q27	0,918	0,511	0,1	0,3
Q28	0,918	0,565	0,733	0,4
Q29	0,92	0,356	0,133	0,4
Q30	0,918	0,521	0,2	0,4
Q31	0,92	0,377	0,333	0,4
Q32	0,918	0,524	0,167	0,4
Q33	0,92	0,41	0,7	0,4
Q34	0,918	0,565	0,833	0,5
Q35	0,918	0,576	0,8	0,5
Q36	0,917	0,611	0,733	0,5
Q37	0,917	0,66	0,767	0,5
Q38	0,917	0,599	0,367	0,5
Q39	0,918	0,523	0,233	0,5
Q40	0,916	0,75	0,8	0,6
Q41	0,92	0,426	0,467	0,6
Q42	0,918	0,571	0,233	0,6
Q43	0,918	0,54	0,367	0,6
Q44	0,916	0,694	0,633	0,8
Q45	0,917	0,598	0,567	0,8
Q46	0,916	0,677	0,633	0,9
Q47	0,915	0,745	0,667	0,9
Q48	0,916	0,689	0,5	0,9
Q49	0,915	0,773	0,6	1
Q50	0,915	0,767	0,4	1

### 3-Correlations with standard supervised psychometric batteries & tests by Dr. Jouve

Following correlations are of preliminary nature due to the fact that there is a small number of different individuals reporting scores, although the number of score pairs seems sufficient (3 candidates reported >3 scores on psychometric batteries each).

Correlations with tests with >=4 score pairs are calculated.

Standard tests used : WAIS (7), RAPM (2), RSPM (1), MAT (1), GAMA (1), FRT-A (1), FRT-B (1), BADyG-M (1).

Dr. Jouve tests used : JCTI (3), NVCPE-R (2), JCCES (2), C-10 (2), TRI (2), C-09 (1), CCAT (1), NVCPE (1), TLAP-R (1).

Total\* : Ceiling scores excluded.

Supervised\* : Ceiling scores excluded.

MIQ : Mean IQ (M=100, SD=15).

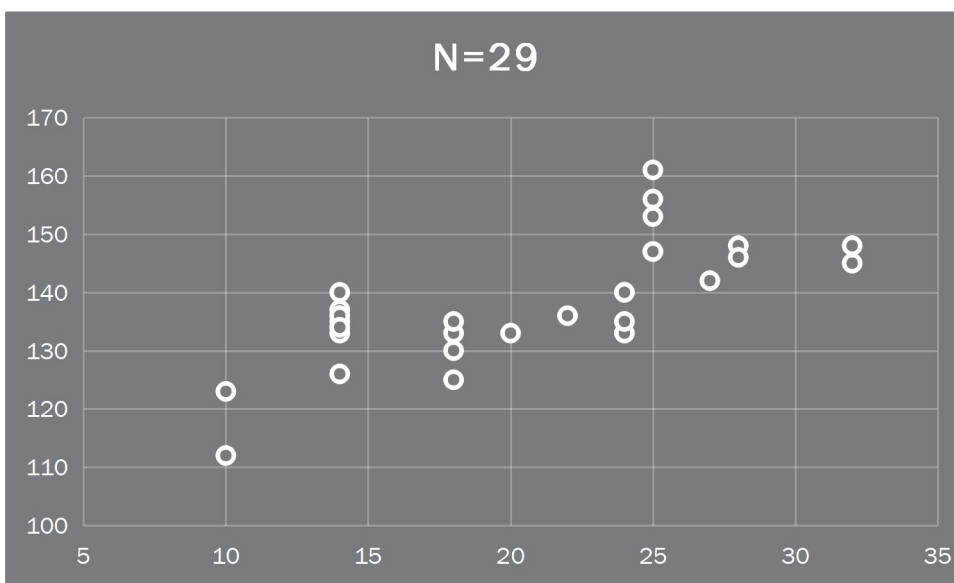
Mtest : Mean raw score on INSC 2019.

(-) as P-Value : Few observations - inaccurate values.

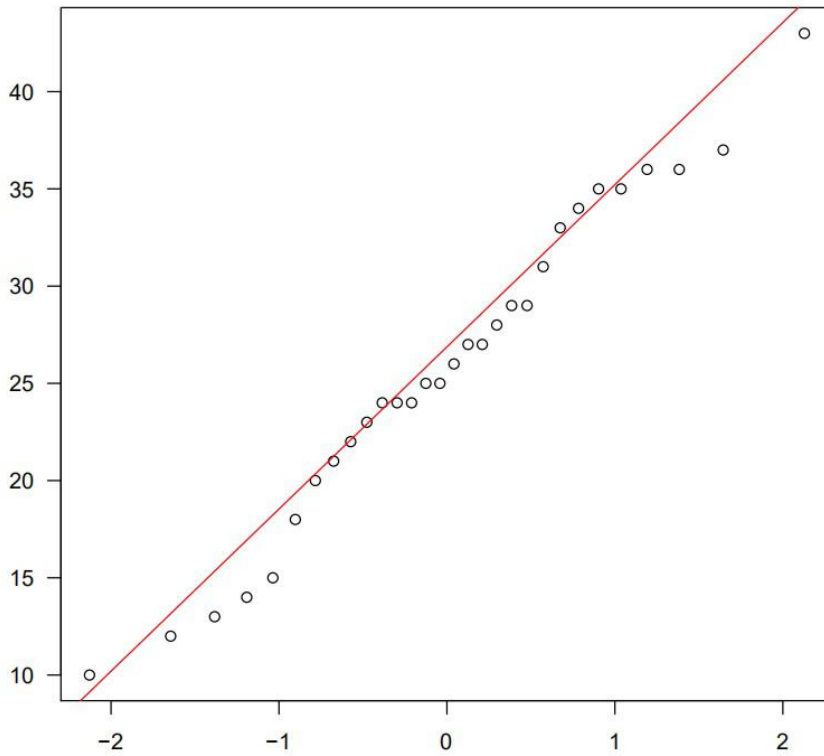
Test	Pairs (IQ range)	r	$\rho$	MIQ	MTest	P-Value
Total*	29 (112 - 161)	0,73	0,77	138,24	20,69	<0,001
Supervised	15 (112 - 148)	0,58	0,48	134,53	19,93	0,07
Supervised*	14 (112 - 148)	0,71	0,54	134,64	18,79	0,04
Dr. Jouve	15 (123 - 161)	0,7	0,83	141,6	22,47	<0.001
WAIS	7 (112 - 148)	0,99	0,99	133,43	21,43	-

### 4-Scatterplots

Scatterplot on total\* (N=29) number of score pairs follows.



### 5-Q-Q plot.



Distribution of scores is quite close to normal. Besides that, when Shapiro-Wilk normality test is run, we get  $W=0,9772$  and p-value of  $0,7467$ . If significance level is set to 5% ( $0,05$ ), the null hypothesis (population is normally distributed) cannot be rejected.

**(Norm follows in the next page)**

## 6-Norm

Presentation of Theoretical IQ (M=100, SD=15) per raw score points follows. Do note, due to the fact that INSC is a running contest and for reasons explained above, that this norm is as precise as can get, according to available data.

Raw Score	Theoretical IQ	Raw Score	Theoretical IQ
7	<=114	29	152
8	114	30	154
9	116	31	156
10	118	32	158
11	121	33	160
12	123	34	162
13	125	35	164
14	128	36	166
15	129	37	167
16	131	38	169
17	132	39	171
18	134	40	173
19	135	41	175
20	136	42	177
21	137	43	178
22	138	44	180
23	140	45	182
24	142	46	184
25	146	47	186
26	147	48	190
27	149	49	194
28	151	50	198

Scores over 39 are currently rough approximations.