

Wilcoxon Signed Ranks Test

Ranks

		N	Mean Rank	Sum of Ranks
pledN - ledN	Negative Ranks	0 ^a	.00	.00
	Positive Ranks	3 ^b	2.00	6.00
	Ties	7 ^c		
	Total	10		
motorN - ledN	Negative Ranks	2 ^d	2.00	4.00
	Positive Ranks	2 ^e	3.00	6.00
	Ties	6 ^f		
	Total	10		
imotorN - ledN	Negative Ranks	2 ^g	2.50	5.00
	Positive Ranks	4 ^h	4.00	16.00
	Ties	4 ⁱ		
	Total	10		
thermalN - ledN	Negative Ranks	0 ^j	.00	.00
	Positive Ranks	10 ^k	5.50	55.00
	Ties	0 ^l		
	Total	10		
audioN - ledN	Negative Ranks	2 ^m	3.00	6.00
	Positive Ranks	4 ⁿ	3.75	15.00
	Ties	4 ^o		
	Total	10		
motorN - pledN	Negative Ranks	3 ^p	3.67	11.00
	Positive Ranks	2 ^q	2.00	4.00
	Ties	5 ^r		
	Total	10		
imotorN - pledN	Negative Ranks	3 ^s	4.83	14.50
	Positive Ranks	4 ^t	3.38	13.50
	Ties	3 ^u		
	Total	10		
thermalN - pledN	Negative Ranks	0 ^v	.00	.00
	Positive Ranks	10 ^w	5.50	55.00
	Ties	0 ^x		
	Total	10		
audioN - pledN	Negative Ranks	4 ^y	3.88	15.50
	Positive Ranks	3 ^z	4.17	12.50
	Ties	3 ^{aa}		
	Total	10		

Ranks

		N	Mean Rank	Sum of Ranks
imotorN - motorN	Negative Ranks	0 ^{ab}	.00	.00
	Positive Ranks	2 ^{ac}	1.50	3.00
	Ties	8 ^{ad}		
	Total	10		
thermalN - motorN	Negative Ranks	0 ^{ae}	.00	.00
	Positive Ranks	10 ^{af}	5.50	55.00
	Ties	0 ^{ag}		
	Total	10		
audioN - motorN	Negative Ranks	1 ^{ah}	5.00	5.00
	Positive Ranks	4 ^{ai}	2.50	10.00
	Ties	5 ^{aj}		
	Total	10		
thermalN - imotorN	Negative Ranks	0 ^{ak}	.00	.00
	Positive Ranks	10 ^{al}	5.50	55.00
	Ties	0 ^{am}		
	Total	10		
audioN - imotorN	Negative Ranks	3 ^{an}	5.33	16.00
	Positive Ranks	4 ^{ao}	3.00	12.00
	Ties	3 ^{ap}		
	Total	10		
audioN - thermalN	Negative Ranks	10 ^{aq}	5.50	55.00
	Positive Ranks	0 ^{ar}	.00	.00
	Ties	0 ^{as}		
	Total	10		

a. pledN < ledN

b. pledN > ledN

c. pledN = ledN

d. motorN < ledN

e. motorN > ledN

f. motorN = ledN

g. imotorN < ledN

h. imotorN > ledN

i. imotorN = ledN

j. thermalN < ledN

k. thermalN > ledN

l. thermalN = ledN

m. audioN < ledN
 n. audioN > ledN
 o. audioN = ledN
 p. motorN < pledN
 q. motorN > pledN
 r. motorN = pledN
 s. imotorN < pledN
 t. imotorN > pledN
 u. imotorN = pledN
 v. thermalN < pledN
 w. thermalN > pledN
 x. thermalN = pledN
 y. audioN < pledN
 z. audioN > pledN
 aa. audioN = pledN
 ab. imotorN < motorN
 ac. imotorN > motorN
 ad. imotorN = motorN
 ae. thermalN < motorN
 af. thermalN > motorN
 ag. thermalN = motorN
 ah. audioN < motorN
 ai. audioN > motorN
 aj. audioN = motorN
 ak. thermalN < imotorN
 al. thermalN > imotorN
 am. thermalN = imotorN
 an. audioN < imotorN
 ao. audioN > imotorN
 ap. audioN = imotorN
 aq. audioN < thermalN
 ar. audioN > thermalN
 as. audioN = thermalN

Test Statistics^a

	pledN - ledN	motorN - ledN	imotorN - ledN	thermalN - ledN
Z	-1.633 ^b	-.378 ^b	-1.190 ^b	-2.850 ^b
Asymp. Sig. (2-tailed)	.102	.705	.234	.004

Test Statistics^a

	audioN - ledN	motorN - pledN	imotorN - pledN	thermalN - pledN
Z	-1.000 ^b	-.966 ^c	-.087 ^c	-2.844 ^b
Asymp. Sig. (2-tailed)	.317	.334	.931	.004

Test Statistics^a

	audioN - pledN	imotorN - motorN	thermalN - motorN	audioN - motorN
Z	-.264 ^c	-1.342 ^b	-2.859 ^b	-.707 ^b
Asymp. Sig. (2-tailed)	.792	.180	.004	.480

Test Statistics^a

	thermalN - imotorN	audioN - imotorN	audioN - thermalN
Z	-2.850 ^b	-.351 ^c	-2.873 ^c
Asymp. Sig. (2-tailed)	.004	.725	.004

a. Wilcoxon Signed Ranks Test

b. Based on negative ranks.

c. Based on positive ranks.