Descriptive Stats: Time to Complete Puzzle (by Accuracy)

The MEANS Procedure

Analysis Variable : Time2_num						
Correct	N Obs	N	Mean	Std Dev	Minimum	Maximum
No	245	245	301.4	136.6	75.0	765.0
Yes	1352	1352	186.8	108.1	31.0	910.0

Independent Samples t-Test: Time to Complete by Puzzle Accuracy

The TTEST Procedure

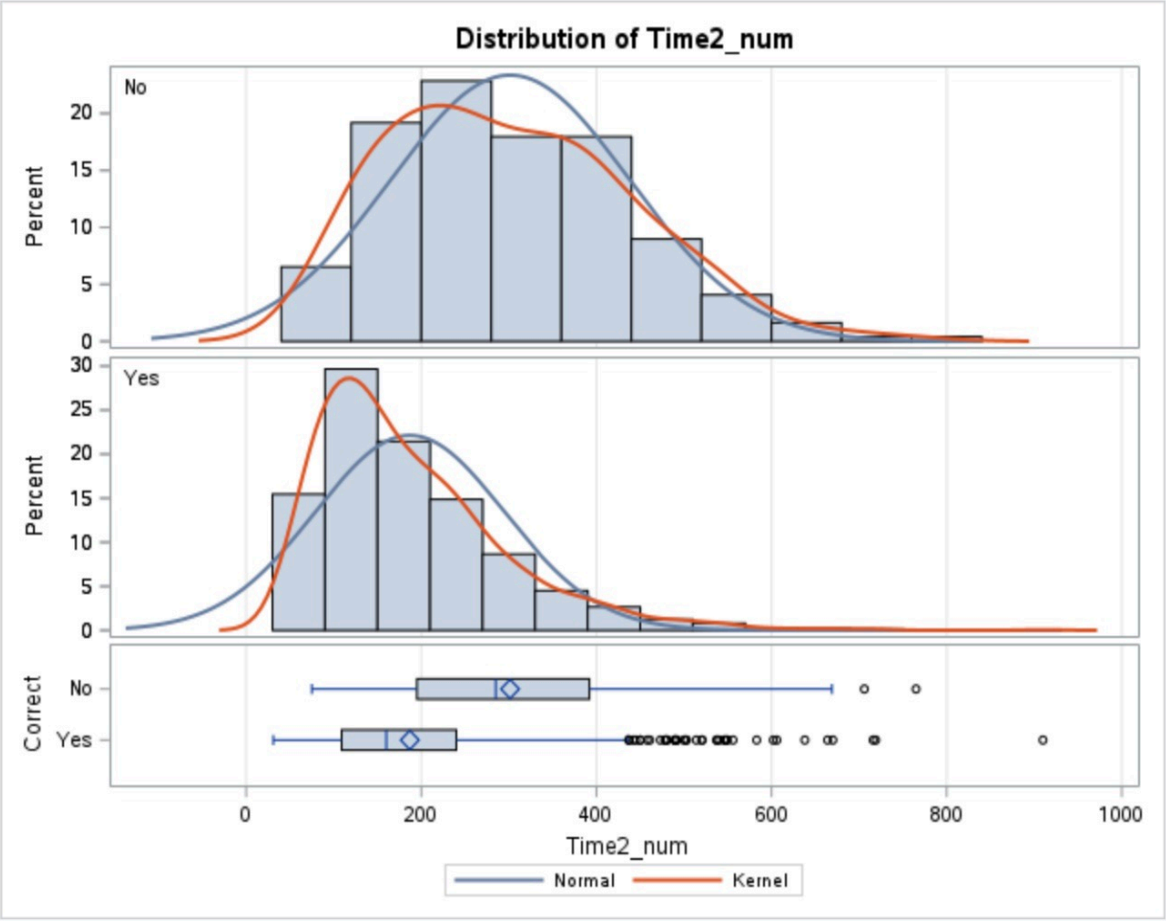
Variable: Time2_num

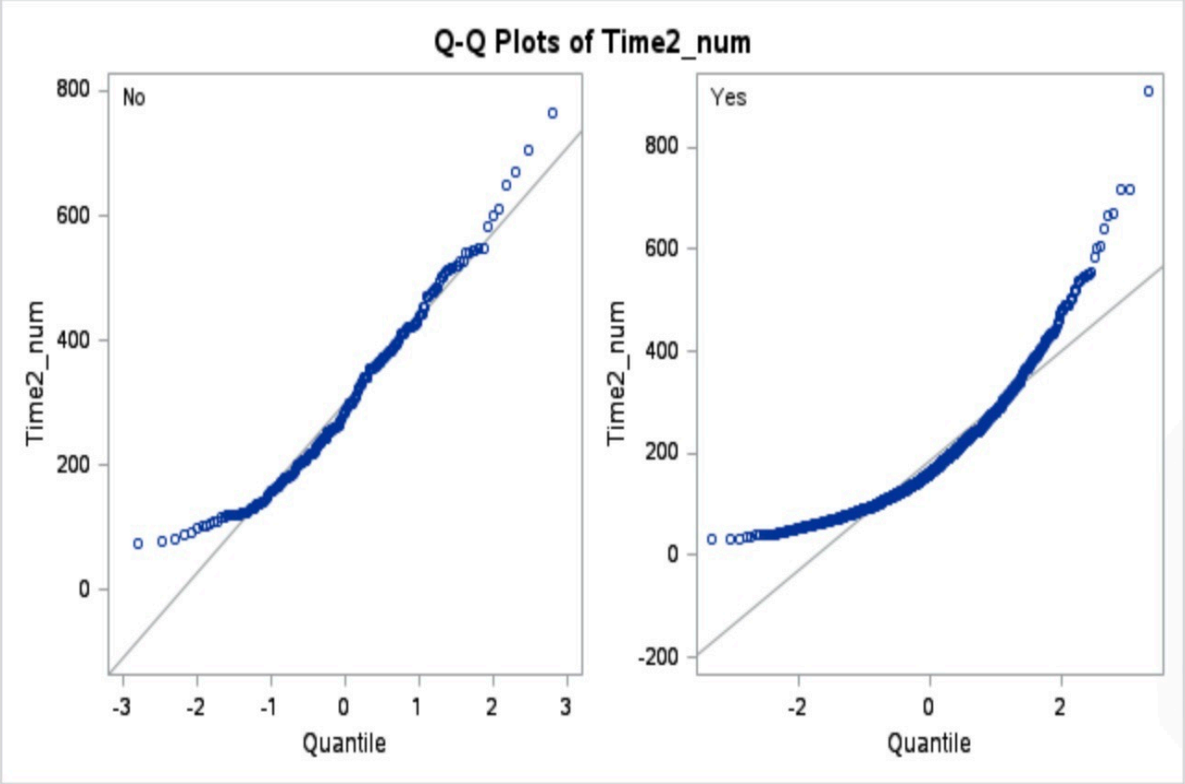
Correct	Method	N	Mean	Std Dev	Std Err	Minimum	Maximum
No		245	301.4	136.6	8.7281	75.0000	765.0
Yes		1352	186.8	108.1	2.9412	31.0000	910.0
Diff (1-2)	Pooled		114.5	113.0	7.8440		
Diff (1-2)	Satterthwaite		114.5		9.2103		

Correct	Method	Mean	95% CL Mean		Std Dev	95% CL Std Dev	
No		301.4	284.2	318.6	136.6	125.5	149.9
Yes		186.8	181.1	192.6	108.1	104.2	112.4
Diff (1-2)	Pooled	114.5	99.1483	129.9	113.0	109.2	117.0
Diff (1-2)	Satterthwaite	114.5	96.4093	132.7			

Method	Variances	DF	t Value	Pr > |t|
Pooled	Equal	1595	14.60	<.0001
Satterthwaite	Unequal	301.86	12.44	<.0001

Equality of Variances				
Method	Num DF	Den DF	F Value	Pr > F
Folded F	244	1351	1.60	<.0001


Distribution of Time2_num
No
Yes
Percent
Correct
Time2_num
Normal
Kernel


Q-Q Plots of Time2_num
No
Yes
Time2_num
Quantile

```
/* Question 2 */
/* Step 1: Import Sudoku dataset */
proc import out=sudoku
    datafile="/home/u64162410/MYST662/3SudokuCombined.csv"
    dbms=csv replace;
    getnames=yes;
run;

/* Step 2: Prepare data by converting Time2 to numeric and filtering valid times */
data sudoku_clean;
    set sudoku;
    /* Convert Time2 to numeric (if not already) */
    Time2_num = input(Time2, best12.);
    /* Keep only rows with non-missing and positive time values */
    if not missing(Time2_num) and Time2_num > 0;
run;

/* Step 3: Get summary statistics for each group (Correct vs Incorrect) */
proc means data=sudoku_clean n mean std min max maxdec=1;
    class Correct;
    var Time2_num;
    title "Descriptive Stats: Time to Complete Puzzle (by Accuracy)";
run;

/* Step 4: Compare average completion time using t-test */
proc ttest data=sudoku_clean;
    class Correct;
    var Time2_num;
    title "Independent Samples t-Test: Time to Complete by Puzzle Accuracy";
run;
```