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الناشر:	المعهد العربي للتخطيط
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N1/Total	N1/Total	N1	A 1
(N1/Total)+(N2/Total)	N2/Total	N2	B 1
	100%	Total=(N1+N2)	

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.(10,6 6,7,8,5,7,6,9

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%10	%10	1	5
%50	%40	4	6
%70	%20	2	7
%80	%10	1	8
%90	%10	1	9
%100	%10	1	10
	%100	10	

$$. \%10 = 1/10 = 5$$

$$. \%40 = 4/10 = 6$$

$$= 6$$

+ (5)

(6)

$$\%50 = \%40 + \%10 =$$

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:2

%51.61	%51.61	996	
%100	%48.39	934	
	%100	1930	

: . 2

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$$\frac{\sum X}{N} =$$

: 1

: 5

4561	1995
4711	1996
4946	1997
5180	1998
5293	1999
24691	
$\frac{\sum X}{N} = \frac{24691}{5} = 4938.2$	

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$$W \quad \frac{\sum WX}{W} =$$

: 2

24

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SPSS

3.2	311	41	48	42	58	59	63	
3.0	380	44	49	47	78	79	83	

) () () (41,48,42,58,59,63)
(44,49,47,78,79,83)

$$\bar{x} = \frac{(41 \cdot 6) + (48 \cdot 5) + (42 \cdot 4) + (58 \cdot 3) + (59 \cdot 2) + (63 \cdot 1)}{311} = 3.2 : .1$$

$$\bar{x} = \frac{(44 \cdot 6) + (49 \cdot 5) + (47 \cdot 4) + (78 \cdot 3) + (79 \cdot 2) + (83 \cdot 1)}{380} = 3.0 : .2$$

3.2 :
(=3)
3.0

X X1 Ho: X=X1 .1

.Ha : X#X1

t : . 2

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Uo .Ho:U#Uo
Ha:U=Uo

: t *

$$T' = \frac{\bar{x} - Uo}{\sigma / \sqrt{n}}$$

.(n) t-Student t *

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(2)

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		<u>المتغير المستقل</u>	
		Nominal or Ordinal	Interval or Ratio data
Interval or Ratio data	Nominal or Ordinal	Gross-Tabulation Chi-Squar	Discriminat Analysis F-Ratio
	Interval or Ratio data	Analysis of Variance F-Ratio <hr/> Paired t-Test Value of t	Regression Analysis R-Squar / F-Ratio <hr/> Correlation Analysis Probability of r

-2

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Paired t-test •

. One-way-Anova •

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.() Paired t-Test

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- t) •

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80
80

15

80

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79	75	1
80	78	2
85	81	3
79	79	4
82	77	5
85	82	6
84	80	7
91	90	8
79	70	9
83	83	10
79	70	11
79	72	12
80	71	13
81	75	14
84	80	15

$$H_0: \mu_2 = \mu_1$$

$$H_A: \mu_2 > \mu_1$$

(H0) %5

SPSS

Variable	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf. Interval]
After	15	82	.8783101	3.40168	[80.11621 , 83.88379]
Before	15	77.533	1.433832	5.553206	[74.45807 , 80.6086]
diff	15	4.4666	.7920237	3.067495	[2.767945 , 6.165389]

Ho: mean(After - Before) = mean(diff) = 0

Ha: mean(diff) < 0 Ha: mean(diff) ≈ 0 Ha: mean(diff) > 0

t = 5.6396 t = 5.6396 t = 5.6396

P < t = 1.0000 P > t = 0.0001 P > t = 0.0000

$$T' = \frac{(\bar{x}_1 - \bar{x}_2) - (\mu_1 - \mu_2)}{\sqrt{\frac{\sigma_1^2}{n_1} + \frac{\sigma_2^2}{n_2}}} : t$$

. 0.05 n (t)

(1.75)

(5.6396)

T

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%5

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.2

(x%)

$$\bar{X}_1 = \bar{X}_2 = \bar{X}_3 = \bar{X}_4 :$$

(% 5 :)

Variance (between groups)/Variance (with groups)

$$j \quad Ms_between_group = \sum_j^m n_j \times \frac{(\bar{x}_j - \bar{x})^2}{j-1} :$$

$$Ms_with_group = \sum_{j=1}^m \sum_{i=1}^{n_i} (y_{ji} - \bar{y}_j)^2 :$$

F

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F

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150	1	1
230	2	2
270	3	3
350	4	4
170	1	5
240	2	6
260	3	7
380	4	8
130	1	9
250	2	10
270	3	11
400	4	12
140	1	13
200	2	14
300	3	15
450	4	16
450	4	17
190	2	18
310	3	19
330	4	20

. : 4 :3 :2 :1

SPSS

Education	Summary of Income		
Level	Mean	Std. Dev.	Freq.
1	147.5	17.078251	4
2	222	25.884358	5
3	282	21.679483	5
4	393.3	50.066622	6
Total	273.5	97.671576	20

Source	Analysis of Variance			F	Prob > F
	SS	df	MS		
Between groups	163286.667	3	54428.8889	48.47	0.0000
Within groups	17968.3333	16	1123.02083		
Total	181255.00	19	9539.73684		

$$(3.23) \quad \frac{54428.8/1123.0=48.47}{F} \quad F \quad) \%5$$

4-20 n-j j=4 (16=

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$$\frac{SS_{BetweenTheGroupe}}{SS_{Total}} =$$

$$\frac{163286}{181255} = 0.90 =$$

· %10 %90

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.	. .4
.	. .5
" "	.6
	.1994

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