

Please check the examination details below before entering your candidate information

Candidate surname

Other names

**Pearson Edexcel
International
Advanced Level**

Centre Number

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Candidate Number

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Thursday 1 November 2018

Afternoon (Time: 2 hours)

Paper Reference **WPS04/01**

Psychology

International Advanced Level

Paper 4: Clinical Psychology and Psychological Skills

You do not need any other materials.

Total Marks

Instructions

- Use **black** ink or ball-point pen.
- **Fill in the boxes** at the top of this page with your name, centre number and candidate number.
- Answer **all** questions.
- Answer the questions in the spaces provided
– *there may be more space than you need.*

Information

- The total mark for this paper is 96.
- The marks for **each** question are shown in brackets
– *use this as a guide as to how much time to spend on each question.*
- The list of formulae and statistical tables are printed at the start of this paper.
- Candidates may use a calculator.

Advice

- Read each question carefully before you start to answer it.
- Check your answers if you have time at the end.

Turn over ►

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FORMULAE AND STATISTICAL TABLES

Standard deviation (sample estimate)

$$\sqrt{\left(\frac{\sum(x - \bar{x})^2}{n - 1}\right)}$$

Spearman's rank correlation coefficient

$$1 - \frac{6 \sum d^2}{n(n^2 - 1)}$$

Critical values for Spearman's rank

Level of significance for a one-tailed test					
	0.05	0.025	0.01	0.005	0.0025
Level of significance for a two-tailed test					
N	0.10	0.05	0.025	0.01	0.005
5	0.900	1.000	1.000	1.000	1.000
6	0.829	0.886	0.943	1.000	1.000
7	0.714	0.786	0.893	0.929	0.964
8	0.643	0.738	0.833	0.881	0.905
9	0.600	0.700	0.783	0.833	0.867
10	0.564	0.648	0.745	0.794	0.830
11	0.536	0.618	0.709	0.755	0.800
12	0.503	0.587	0.678	0.727	0.769
13	0.484	0.560	0.648	0.703	0.747
14	0.464	0.538	0.626	0.679	0.723
15	0.446	0.521	0.604	0.654	0.700
16	0.429	0.503	0.582	0.635	0.679
17	0.414	0.485	0.566	0.615	0.662
18	0.401	0.472	0.550	0.600	0.643
19	0.391	0.460	0.535	0.584	0.628
20	0.380	0.447	0.520	0.570	0.612
21	0.370	0.435	0.508	0.556	0.599
22	0.361	0.425	0.496	0.544	0.586
23	0.353	0.415	0.486	0.532	0.573
24	0.344	0.406	0.476	0.521	0.562
25	0.337	0.398	0.466	0.511	0.551
26	0.331	0.390	0.457	0.501	0.541
27	0.324	0.382	0.448	0.491	0.531
28	0.317	0.375	0.440	0.483	0.522
29	0.312	0.368	0.433	0.475	0.513
30	0.306	0.362	0.425	0.467	0.504

The calculated value must be equal to or exceed the critical value in this table for significance to be shown.

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Chi-squared distribution formula

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

$$df = (r - 1)(c - 1)$$

Critical values for chi-squared distribution

Level of significance for a one-tailed test						
	0.10	0.05	0.025	0.01	0.005	0.0005
Level of significance for a two-tailed test						
df	0.20	0.10	0.05	0.025	0.01	0.001
1	1.64	2.71	3.84	5.02	6.64	10.83
2	3.22	4.61	5.99	7.38	9.21	13.82
3	4.64	6.25	7.82	9.35	11.35	16.27
4	5.99	7.78	9.49	11.14	13.28	18.47
5	7.29	9.24	11.07	12.83	15.09	20.52
6	8.56	10.65	12.59	14.45	16.81	22.46
7	9.80	12.02	14.07	16.01	18.48	24.32
8	11.03	13.36	15.51	17.54	20.09	26.12
9	12.24	14.68	16.92	19.02	21.67	27.88
10	13.44	15.99	18.31	20.48	23.21	29.59
11	14.63	17.28	19.68	21.92	24.73	31.26
12	15.81	18.55	21.03	23.34	26.22	32.91
13	16.99	19.81	22.36	24.74	27.69	34.53
14	18.15	21.06	23.69	26.12	29.14	36.12
15	19.31	22.31	25.00	27.49	30.58	37.70
16	20.47	23.54	26.30	28.85	32.00	39.25
17	21.62	24.77	27.59	30.19	33.41	40.79
18	22.76	25.99	28.87	31.53	34.81	42.31
19	23.90	27.20	30.14	32.85	36.19	43.82
20	25.04	28.41	31.41	34.17	37.57	45.32
21	26.17	29.62	32.67	35.48	38.93	46.80
22	27.30	30.81	33.92	36.78	40.29	48.27
23	28.43	32.01	35.17	38.08	41.64	49.73
24	29.55	33.20	36.42	39.36	42.98	51.18
25	30.68	34.38	37.65	40.65	44.31	52.62
26	31.80	35.56	38.89	41.92	45.64	54.05
27	32.91	36.74	40.11	43.20	46.96	55.48
28	34.03	37.92	41.34	44.46	48.28	56.89
29	35.14	39.09	42.56	45.72	49.59	58.30
30	36.25	40.26	43.77	46.98	50.89	59.70
40	47.27	51.81	55.76	59.34	63.69	73.40
50	58.16	63.17	67.51	71.42	76.15	86.66
60	68.97	74.40	79.08	83.30	88.38	99.61
70	79.72	85.53	90.53	95.02	100.43	112.32

The calculated value must be equal to or exceed the critical value in this table for significance to be shown.



Wilcoxon Signed Ranks test process

- Calculate the difference between two scores by taking one from the other
- Rank the differences giving the smallest difference Rank 1

Note: do not rank any differences of 0 and when adding the number of scores, do not count those with a difference of 0, and ignore the signs when calculating the difference

- Add up the ranks for positive differences
- Add up the ranks for negative differences
- T is the figure that is the smallest when the ranks are totalled (may be positive or negative)
- N is the number of scores left, ignore those with 0 difference

Critical values for the Wilcoxon Signed Ranks test

<i>n</i>	Level of significance for a one-tailed test		
	0.05	0.025	0.01
	Level of significance for a two-tailed test		
	0.1	0.05	0.02
N=5	0	-	-
6	2	0	-
7	3	2	0
8	5	3	1
9	8	5	3
10	11	8	5
11	13	10	7
12	17	13	9

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SECTION A

CLINICAL PSYCHOLOGY

Answer ALL questions. Write your answers in the spaces provided.

1 Katie has reviewed the secondary data from 46 studies that investigated the effectiveness of drug treatments for individuals with schizophrenia.

(a) Describe what is meant by 'secondary data'.

(2)

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(b) Explain **two** strengths of using secondary data to research the effectiveness of drug treatments for individuals with schizophrenia.

(4)

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(Total for Question 2 = 6 marks)

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4 Compare the function of neurotransmitters with **one** other biological explanation of schizophrenia.

(6)

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(Total for Question 4 = 6 marks)



5 Jagdeep investigated the success rates of combined therapies for the treatment of mental health disorders.

- Group A contained 25 individuals receiving family therapy combined with drug treatments.
- Group B contained 16 individuals receiving drug treatments alone.

Jagdeep recorded the total number of individuals in each group who had relapsed.

The results of her investigation are shown in **Table 1**.

	Group A Individuals receiving family therapy and drug treatments	Group B Individuals receiving drug treatments alone
Total number of individuals who had relapsed by one month	4	2
Total number of individuals who had relapsed by two months	5	6
Total number of individuals who had relapsed by three months	12	12
Total number of individuals who had relapsed by four months	16	14

Table 1

- (a) Calculate, using the data in **Table 1**, the ratio for participants in **Group B** who had relapsed by four months compared to those who had not relapsed.

You **must** express your answer in the lowest form.

(1)

Space for calculations

Ratio of relapse for Group B

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Jagdeep concluded that individuals undertaking a combined therapy programme should be given additional support within the first two months.

(b) Justify, using the data in **Table 1**, whether the conclusion Jagdeep reached is accurate.

(2)

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(c) Determine, using the data in **Table 1**, whether combined therapy is more effective than drug treatments alone.

(3)

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(Total for Question 5 = 6 marks)

TOTAL FOR SECTION A = 32 MARKS



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(Total for Question 6 = 16 marks)

TOTAL FOR SECTION B = 16 MARKS



SECTION C
PSYCHOLOGICAL SKILLS

Answer ALL questions. Write your answers in the spaces provided.

- 7 Ferdinand is investigating whether there is a gender bias in how sportsmen and sportswomen are portrayed in the media.

He first conducts a thematic analysis on five newspaper reports about the sporting achievements of men and women in a recent international sports competition.

He finds four main themes in the reports. The number of occurrences of each theme by gender is shown in **Table 2**.

Theme	Number of occurrences in reports about men	Number of occurrences in reports about women
Strength	### ### ### ###	-
Commitment	### ###	### ###
Pride	### ### ###	###
Kindness	###	### ### ###

Table 2

- (a) Calculate the occurrence of kindness for women as a percentage of all occurrences of kindness.

(1)

Space for calculations

Percentage occurrence of kindness for women

- (b) Calculate the occurrence of pride for women as a fraction of all occurrences of pride.

You **must** express your answer in the lowest form.

(1)

Space for calculations

Pride for women as a fraction

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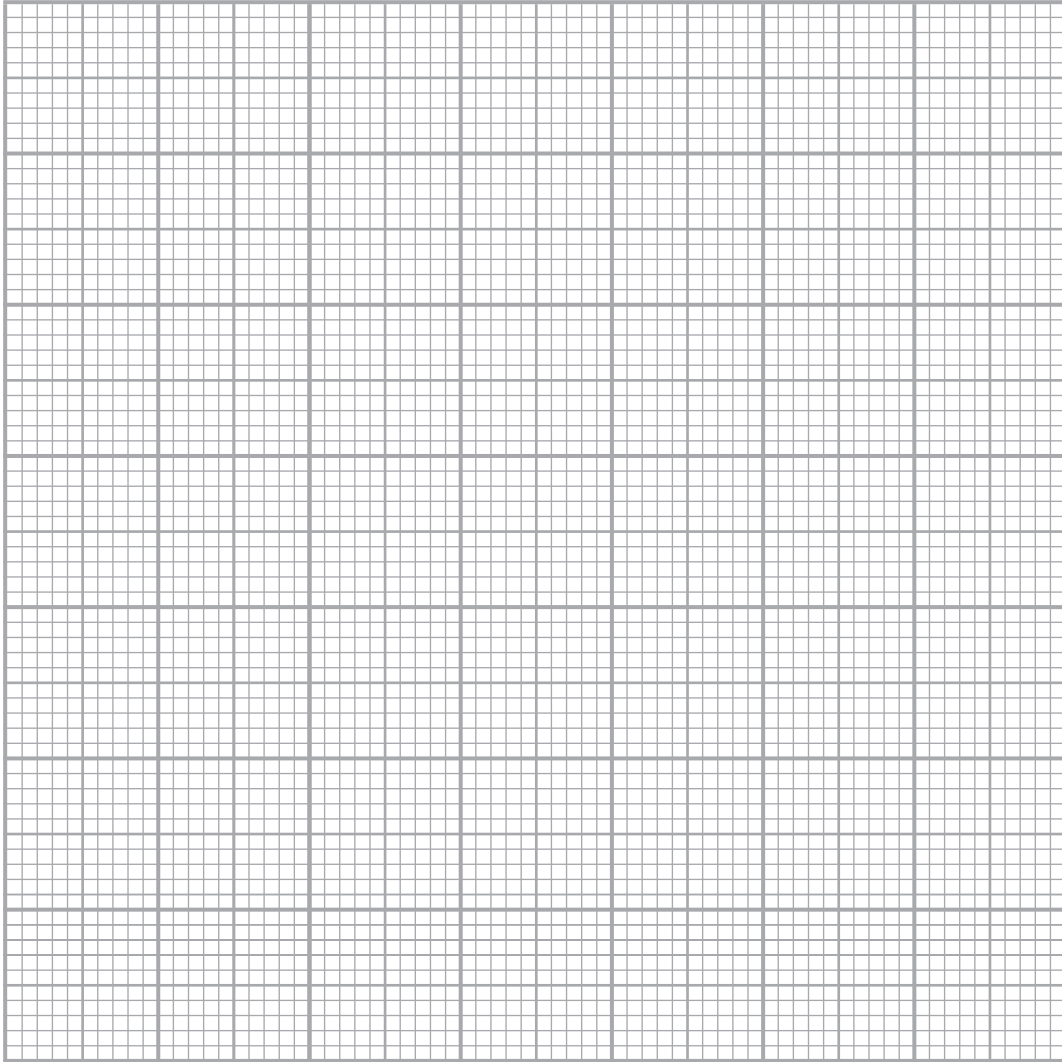
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(c) Draw a bar chart to show the data for the themes of strength and kindness for men and women shown in **Table 2**.

(3)

Title



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(d) Explain **two** strengths of Ferdinand using a thematic analysis to investigate gender bias in how sportsmen and sportswomen are portrayed in the media.

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(e) Describe **two** ways Ferdinand could have made his thematic analysis about gender bias reliable.

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(Total for Question 7 = 13 marks)

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- 8 Alejandro investigated whether positive reinforcement was effective in encouraging 15-year-old students to complete homework tasks on time. He used a repeated measures design and had a sample of eight students.

In Condition A, no positive reinforcement was used and the number of homework tasks completed on time was counted during a two-week period.

For Condition B, positive reinforcement was used over the next two weeks and the number of homework tasks completed on time was counted.

The results of his investigation are shown in **Table 3**.

Participant	Condition A	Condition B
A	5	8
B	9	11
C	11	10
D	6	10
E	4	9
F	11	11
G	8	10
H	6	9

Table 3

- (a) Calculate, using the data in **Table 3**, the difference in the total number of homework tasks completed on time between Condition A and Condition B.

(1)

Space for calculations

Difference in the total number of homework tasks completed on time

- (b) Determine, using the data in **Table 3**, how many students showed no improvement in homework tasks completed on time.

(1)

Number of students showing no improvement



Alejandro used a Wilcoxon Signed Ranks test to find out if his data showed significant results.

- (c) (i) Calculate the T value for the data gathered by Alejandro by completing **Table 4**.

The formulae and statistical tables can be found at the front of the paper.

You **must** show your working out.

(4)

Participant	Condition A	Condition B	Difference	Ranked Difference
A	5	8		
B	9	11		
C	11	10		
D	6	10		
E	4	9		
F	11	11		
G	8	10		
H	6	9		

Table 4

Space for calculations

T value =

- (ii) Determine whether this result is significant for a one-tailed directional test at $P=0.05$ where $N=7$.

(1)

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(Total for Question 8 = 7 marks)

TOTAL FOR SECTION C = 20 MARKS



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(Total for Question 9 = 8 marks)

TOTAL FOR SECTION D = 8 MARKS



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(Total for Question 10 = 20 marks)

TOTAL FOR SECTION E = 20 MARKS

TOTAL FOR PAPER = 96 MARKS



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