Candidate surname | Other names

**Pearson Edexcel**
International
Advanced Level

Centre Number | Candidate Number

# Thursday 31 October 2019

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* ▶

Pearson

# 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.**

**Chi-squared distribution formula**

$$X^2 = \sum \frac{(O-E)^2}{E} \qquad\qquad df = (r-1)(c-1)$$

**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**

| | **Level of significance for a one-tailed test** | | |
|---|---|---|---|
| | 0.05 | 0.025 | 0.01 |
| | **Level of significance for a two-tailed test** | | |
| *n* | 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 |

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

P 5 8 1 6 4 A 0 4 3 2

**SECTION A**

**CLINICAL PSYCHOLOGY**

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

1 One mental health disorder you will have studied is schizophrenia.

(a) Describe what is meant by 'disordered thinking' as a symptom of schizophrenia.

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(b) Explain the function of neurotransmitters as an explanation of schizophrenia.

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(c) Explain **two** ways that family therapy can help patients with schizophrenia in their recovery.

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**(Total for Question 1 = 10 marks)**

**2** In your studies of clinical psychology, you will have learned about the classic study by Rosenhan (1973).

Describe the procedure used by Rosenhan (1973).

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**(Total for Question 2 = 4 marks)**

**3** Bryony has been referred to a doctor as she has been displaying unusual behaviour. The doctor believes that Bryony is not functioning normally in her day-to-day life. For example, she has forgotten to wash herself this week, went to work in her pyjamas, and has not eaten for two days.

Explain **two** strengths of using failure to function adequately to determine whether Bryony's behaviour is abnormal.

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**(Total for Question 3 = 4 marks)**

**4** Andreas is planning to conduct a randomised controlled trial to investigate the effectiveness of a new type of drug treatment for patients with schizophrenia.

Describe a procedure that Andreas could use to conduct his randomised controlled trial to investigate the drug treatment for schizophrenia.

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**(Total for Question 4 = 6 marks)**

**5** The Health and Care Professions Council (HCPC) guidelines for clinical psychology practitioners are a requirement for professional practice.

Explain **two** ways the Health and Care Professions Council (HCPC) guidelines help regulate professional practice.

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**(Total for Question 5 = 4 marks)**

P 5 8 1 6 4 A 0 1 1 3 2

**6** In your studies of clinical psychology, you will have conducted a practical investigation.

Explain **two** improvements you could make to your practical investigation.

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**(Total for Question 6 = 4 marks)**

**TOTAL FOR SECTION A = 32 MARKS**

## SECTION B

## CLINICAL PSYCHOLOGY

**Answer the question. Write your answer in the space provided.**

**7** Evaluate the contemporary study by Suzuki et al. (2014).

(16)

P 5 8 1 6 4 A 0 1 5 3 2

**(Total for Question 7 = 16 marks)**

**TOTAL FOR SECTION B = 16 MARKS**

P 5 8 1 6 4 A 0 1 6 3 2

## SECTION C

## PSYCHOLOGICAL SKILLS

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

**8** Marco investigated whether positive reinforcement was more effective than positive punishment for encouraging employees to help each other at work.

Marco used a random sampling technique to allocate employees in his workplace into two groups.

- Group A were positively reinforced by their manager for helping a colleague
- Group B were positively punished by their manager for not helping a colleague

For three weeks the employees were positively reinforced or positively punished by their manager each time they were seen helping or not helping another colleague.

In the fourth week Marco tallied how many times he observed the employees in each group help another employee.

(a) Identify the experimental/research design used by Marco in his investigation.

(1)

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(b) Explain **one** strength of the sampling technique used by Marco in his investigation about employees helping each other at work.

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(c) Explain **two** weaknesses, other than ethical issues, of Marco's investigation about employees helping each other at work.

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**(Total for Question 8 = 7 marks)**

**9** Kathryn used a correlation research method to investigate whether the number of violent video games played in childhood increased the number of incidents of violent behaviour in adulthood.

(a) Suggest why Kathryn chose to use a correlation research method for this investigation instead of a longitudinal method.

**(2)**

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(b) Explain **one** weakness of Kathryn using a correlation research method for this investigation.

**(2)**

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(c) Kathryn asked adult prisoners with one or more recorded aggressive offences to state the number of violent video games they played in childhood.

Describe why Kathryn would use Spearman's rank to test the significance of the data she gathered from the adult prisoners.

(2)

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**(Total for Question 9 = 6 marks)**

**10** Daisy used a questionnaire to investigate whether students in her college were more likely to be friends with students studying the same subject, rather than with students studying different subjects.

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

| Group | Number of students |
|---|---|
| Students with more friends studying the **same** subject | 65 |
| Students with more friends studying a **different** subject | 35 |
| Students who did not complete the questionnaire | 20 |

**Table 1**

(a) Calculate the percentage of students who did not complete the questionnaire.

You **must** give your answer to **two** decimal places.

**(1)**

**Space for calculations**

Percentage ...............................................................................................

(b) Calculate the ratio of students with more friends studying the same subject to those having more friends studying a different subject.

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

**(1)**

**Space for calculations**

Ratio ...............................................................................................

(c) Draw a bar chart to represent the data in **Table 1**.

(3)

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(d) Explain, with reference to the data in **Table 1**, **one** conclusion Daisy could make about college students' friendship groups.

(2)

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**(Total for Question 10 = 7 marks)**

**TOTAL FOR SECTION C = 20 MARKS**

**SECTION D**

**Answer the question. Write your answer in the space provided.**

**11** One key question for society is whether direct interventions to improve working memory can help children with dyslexia.

Dyslexia is a developmental disorder where individuals have difficulties with written language, such as reading and writing.
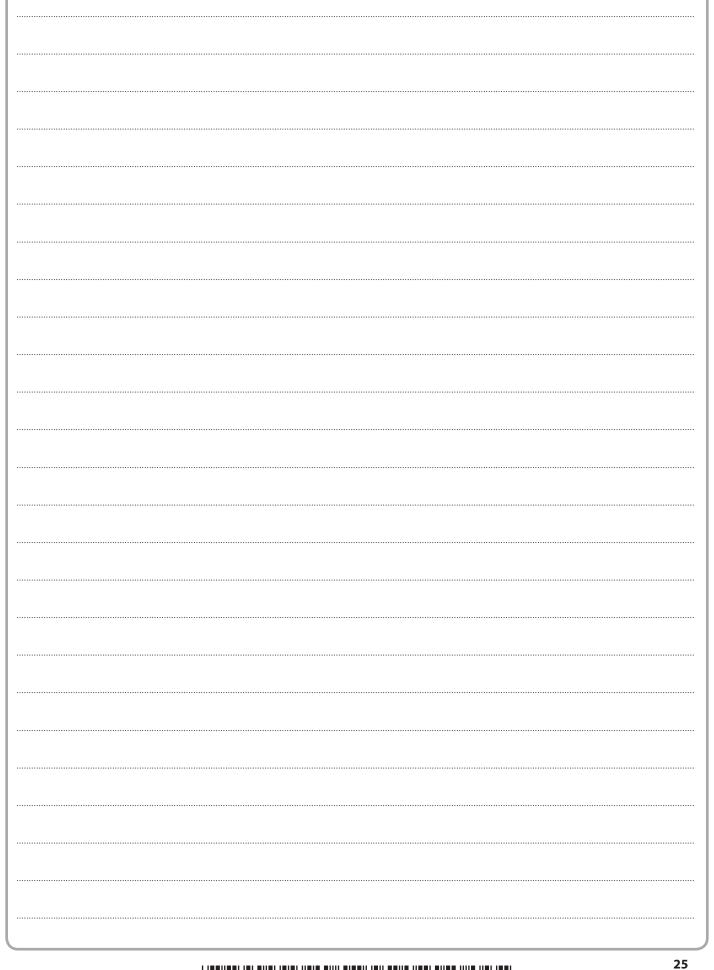
Alloway et al. (2009) suggested that children with dyslexia have difficulty processing and remembering speech sound because they cannot hold all the information in their short-term memory. Using this idea, direct interventions have been developed that are computer-based and target a range of working memory skills to increase processing speed and capacity.

However, Boets et al. (2012) suggest that it is the brain connections between the areas that represent speech sounds, along with part of the left frontal lobe, that are significantly different in individuals with dyslexia.

Other explanations may suggest it is the way in which a child learns language that influences dyslexia.

Discuss the key question of whether direct interventions to improve working memory can help children with dyslexia. You should use concepts, theories and/or research studied in your psychology course.

You must make reference to the context in your answer.

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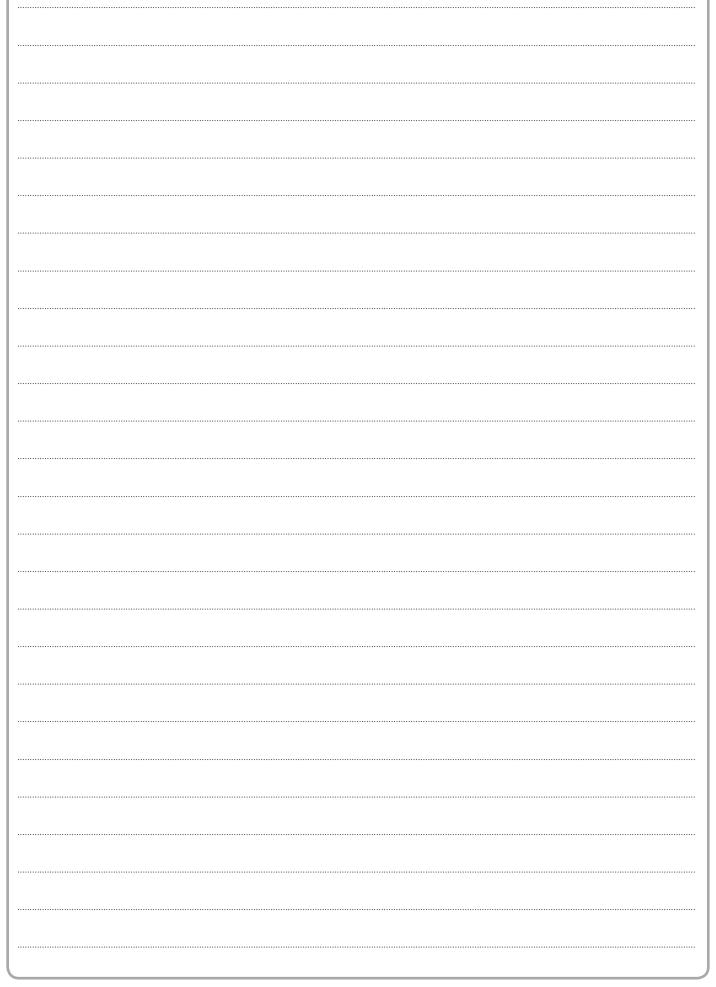
**(Total for Question 11 = 8 marks)**

**TOTAL FOR SECTION D = 8 MARKS**

## SECTION E

**Answer the question. Write your answer in the space provided.**

**12** Assess the importance of the practical issues that psychologists should consider in the design and implementation of research.

(20)

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**(Total for Question 12 = 20 marks)**

**TOTAL FOR SECTION E = 20 MARKS**
**TOTAL FOR PAPER = 96 MARKS**

P 5 8 1 6 4 A 0 3 1 3 2

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