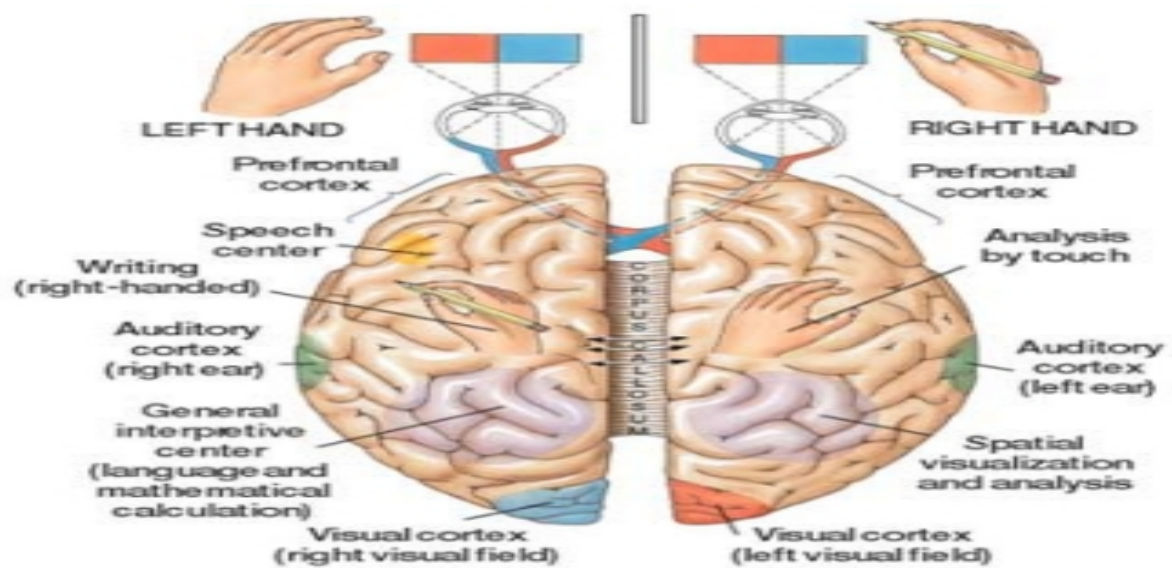


PSYCHOLOGY TRANSITION



Name:

GCSE Maths grade:

GCSE English grade:

GCSE Science grade:

This transition work is designed to test your GCSE maths skills. Although it has a psychological aspect it only contains skills you know from your GCSEs. If you are stuck have a look back at your Maths notes.

Answer all the questions

Total marks: 54

You may use a calculator

1. The following data is from an experiment on reaction times, and represents the number of times a button was pressed within half a second of being shown an object on the screen:

5, 3, 6, 7, 7, 4, 8, 5, 4, 4, 5, 3, 4, 8, 17

Calculate the:

- a) Mean: (1 mark)
- b) Median: (1 mark)
- c) Mode: (1 mark)
- d) Range: (1 mark)

2. The following are individual participants' scores on a memory test:

14, 8, 12, 10, 8, 8, 7, 6, 13, 11, 6, 6, 6, 14, 15, 13, 8, 14, 8, 11

Calculate the:

- a) Mean: (1 mark)
- b) Median: (1 mark)
- c) Mode: (1 mark)
- d) Range: (1 mark)

3. An experiment into memory was carried out. 24 participants were given a list of 20 words to remember. The number of words each participant was able to remember is:

5, 8, 18, 15, 3, 9, 20, 4, 15, 17, 16, 10, 11, 8, 3, 2, 2, 8, 9, 6, 16, 17, 15, 11

Calculate the:

- a) Mean: (1 mark)
- b) Median: (1 mark)
- c) Mode: (1 mark)
- d) Range: (1 mark)

4. What is the missing number? $\frac{2}{3} = \frac{?}{15}$ (1 mark)

5. What is the missing number? $\frac{3}{4} = \frac{9}{?}$ (1 mark)

6. What is the missing number? $\frac{24}{36} = \frac{?}{3}$ (1 mark)

7. Simplify $\frac{24}{30}$ (1 mark)

8. Simplify $\frac{25}{30}$ (1 mark)

9. What's $\frac{3}{4}$ of 72? (1 mark)

10. What's $\frac{5}{8}$ of 40? (1 mark)

11. Write 40p as a fraction of £1 (1 mark)

12. Write 20mm as a fraction of 40mm (1 mark)

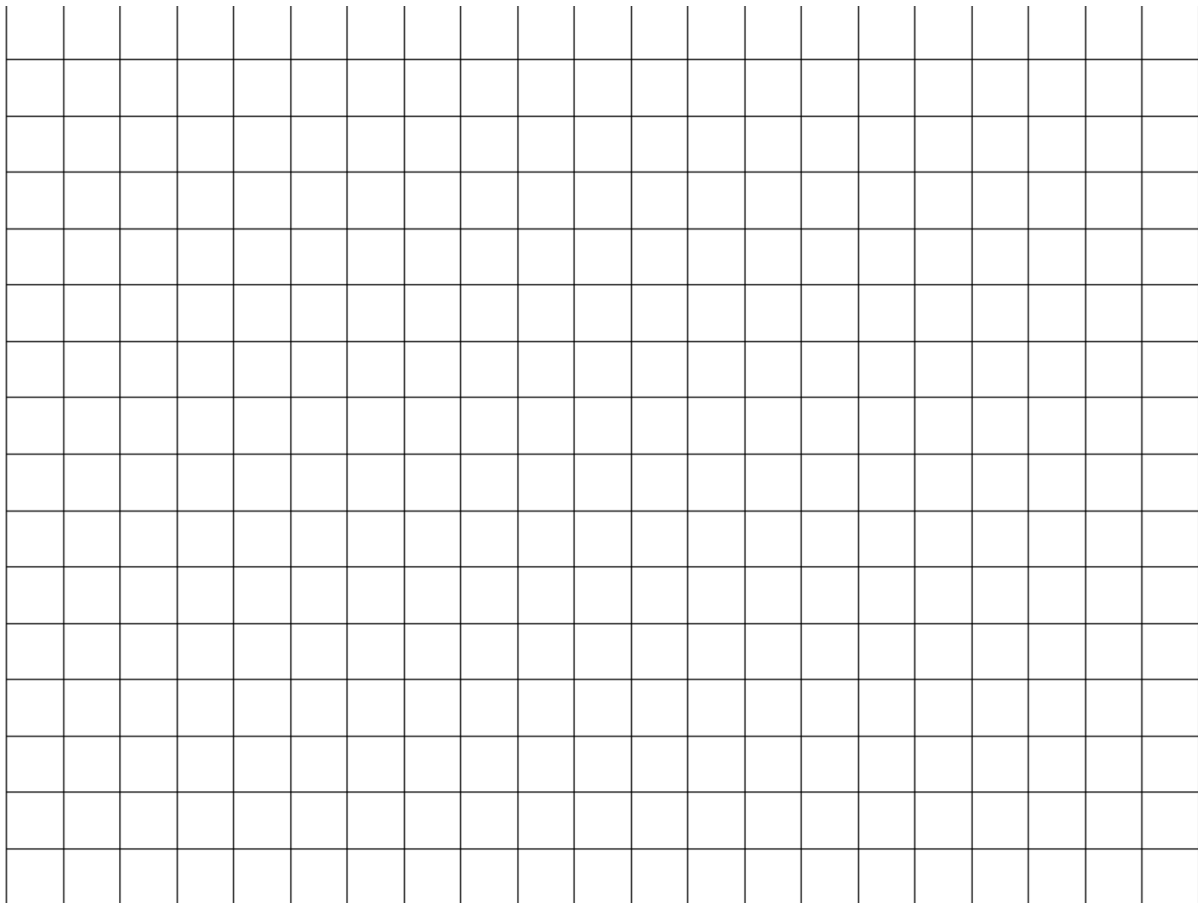
13. Express 0.02 as a fraction (1 mark)

14. Express 0.05 as a fraction (1 mark)

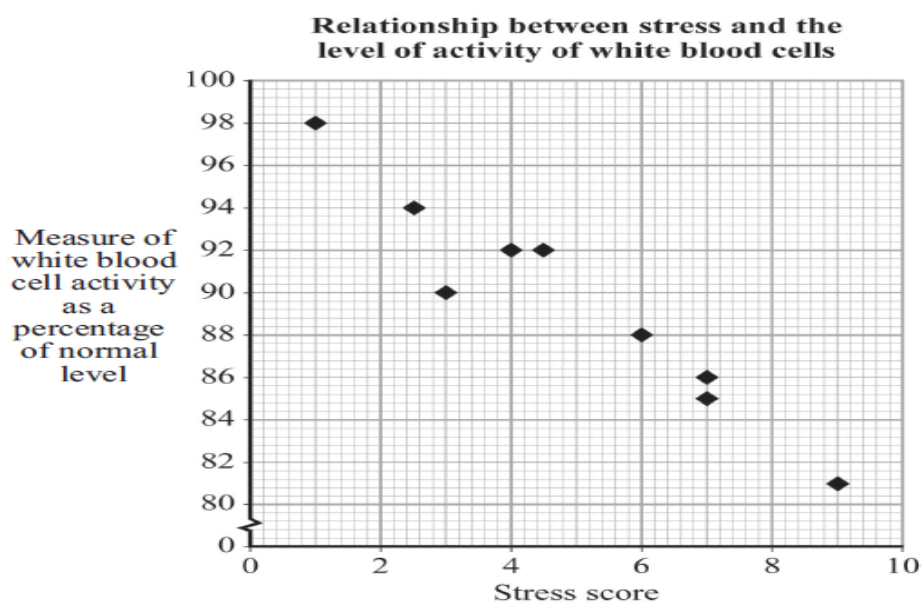
15. Write 40% as a fraction (1 mark)
16. If there were 120 participants in a study and 40 were in condition A, what percentage of participants was this? (Give your answer to two significant figures) (2 marks)
17. What percentage of participants (in Q16) were in condition B? (Give you answer to one significant figure) (2 marks)
18. Write the following fraction $\frac{30}{100}$ as a percentage and a decimal (2 marks)
19. What ratio is equivalent to 2:3? (1 mark *circle the correct answer*)
4:7 5:10 6:9
20. Write 14:35 in its simplest form? (1 mark)
21. In a psychology study 4 experimenters are required to run a study with 32 participants. How many experimenters will be required for 40 participants? (1 mark)
22. What is 7.994 to two significant figures? (1 mark)
23. What would you get if you wrote 0.0000058763 correct to 2 significant figures? (1 mark)
24. The table below shows the results of an obedience study. What percentage of the participants who obeyed were boys? (1 mark)

	Boys	Girls
Obeyed	36	24
Disobeyed	52	64

25. Draw a bar chart showing the percentage obedience for boys and girls from the table above. Use the graph paper on the next page. You get marks for a title, labelling the axes and accurate plotting. (4 marks)



26. Psychologists did a study which looked at the relationship between stress and white blood cell activity. The graph below shows the results:

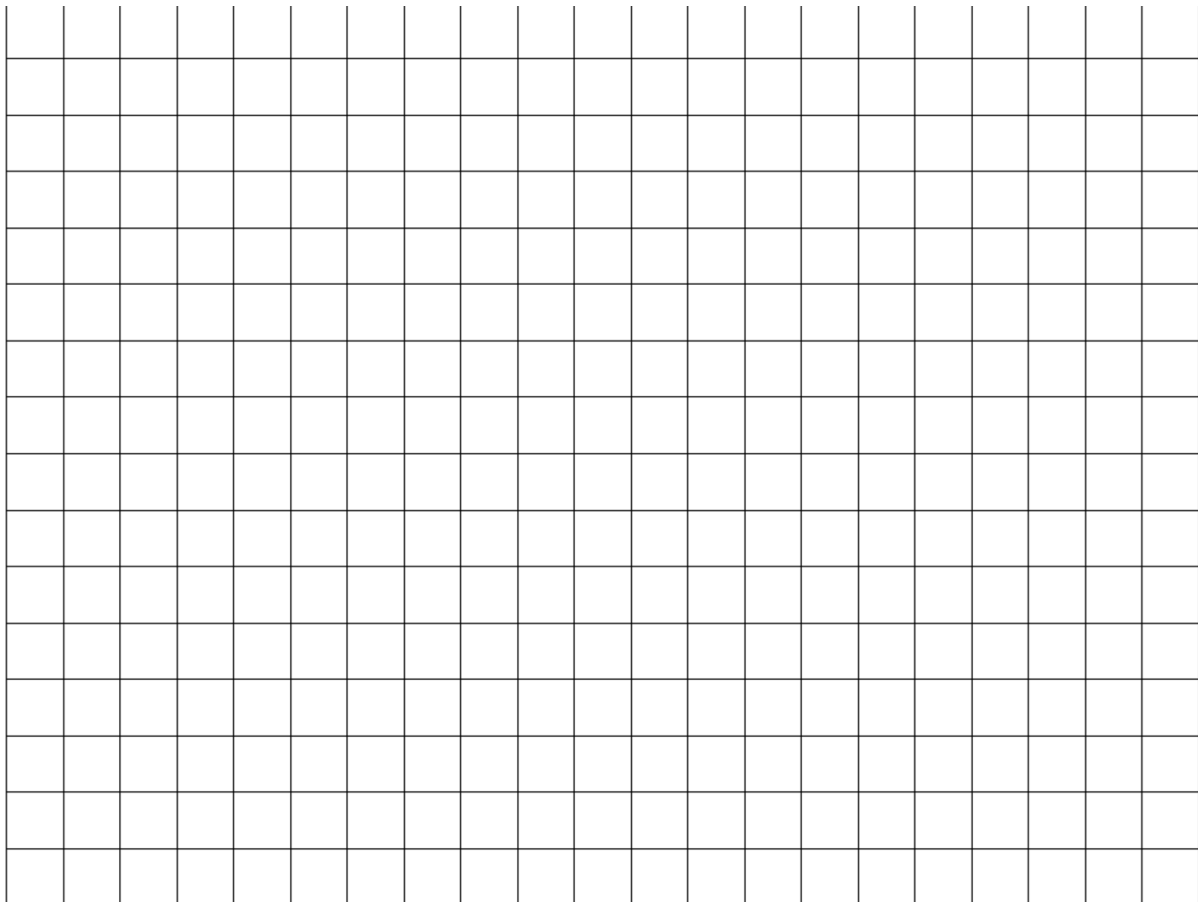


- a) How many participants did they use in their study? (1 mark)
- b) Does it show a positive or negative correlation?.....(1mark)
- c) Strong or moderate or weak correlation? (1 mark)
- d) Describe this correlation in words (2 marks)

27. Gill is investigating the relationship between height and scores on a depression index. The results are shown in the table below. Draw a scattergram for this data on

the next page. You get marks for a title, labelling the axes and accurate plotting. (4 marks)

Height (cm)	Depression Score
150	20
164	32
100	10
130	18
140	30



28. What does your scattergram above show? (2 marks)

29. Explain what the following expression means: 'The number of girls < number of boys'
(1 mark)

30. $S=2$ and the critical value is 0. For the results to be significant in a sign test S must be \geq the critical value. Are these results significant? (2 marks)

Working out page:

Working out page:

Working out page: