Numerical Reasoning Practice Test 1

Many employers use psychometric testing in their recruitment process, with numerical reasoning tests often included.

The questions used in the following test are based on those available on the www.assessmentday.co.uk and www.graduatesfirst.com websites.

This test comprises 23 questions and you have 25 minutes to complete it.

The main numerical skills required for the test typically relate to percentages, ratios and reading/interpreting charts and graphs. Often the same data is used for several questions, so it is advisable get a clear grasp of the context before starting your calculations.

Calculators are allowed, so make sure that you are familiar with yours and are confident in using it.
Question 1

The chart below shows the number of new members by type (i.e. level of membership) at a Fitness Centre each month.

In which month is the greatest number of new members obtained?

☐ February
☐ March
☐ April
☐ May
☐ June
Question 2

The chart below shows the number of new members by type (i.e. level of membership) at a Fitness Centre each month.

In April what percentage (to the nearest whole number) of the new members are Super?

☐ 18%
☐ 19%
☐ 20%
☐ 21%
☐ 22%
Question 3

The chart below shows the number of new members by type (i.e. level of membership) at a Fitness Centre each month.

Over the 5 month period, what is the average number of Deluxe new members per month?

☐ 11
☐ 12
☐ 13
☐ 14
☐ 15
Question 4

The chart below shows the number of new members by type (i.e. level of membership) at a Fitness Centre each month.

In May, what is the ratio of Super new members to Off Peak new members?

☐ 5: 11
☐ 11: 5
☐ 2: 5
☐ 6: 5
☐ 7: 5
Question 5

The chart below shows the number of new members by type (i.e. level of membership) at a Fitness Centre each month.

What is the best approximation to the percentage increase in Standard new members between February and March?

☐ 2%
☐ 9%
☐ 10%
☐ 11%
☐ 21%
Question 6

A client has a portfolio of shares in 5 companies and is reviewing their annual performance.

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<thead>
<tr>
<th>Company type</th>
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Which company’s shares contribute the greatest value to the portfolio on 1\textsuperscript{st} January?

☐ Media
☐ Insurance
☐ Retail
☐ Energy
☐ Leisure
Question 7

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Which company produced the greatest percentage increase in the price per share over the year?

☐ Media
☐ Insurance
☐ Retail
☐ Energy
☐ Leisure
Question 8

A client has a portfolio of shares in 5 companies and is reviewing their annual performance.

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In June, half of the shares in Insurance are sold at 402p per share. The money received is reinvested in the same company on 31st December. How many shares does the client hold in Insurance at the end of the year?

☐ 6,144
☐ 6,688
☐ 9,938
☐ 6,322
☐ 6,876
Question 9

A client has a portfolio of shares in 5 companies and is reviewing their annual performance.

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Between 1st January and 1st May the share price of Retail falls by 10%. What percentage increase in the price per share takes place between 1st May and 31st December?

☐ 28.78%
☐ 22.35%
☐ 27.73%
☐ 18.60%
☐ 25.91%
Question 10

A client has a portfolio of shares in 5 companies and is reviewing their annual performance.

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Which of the following ratios best represents the ratio of the number of shares held in Retail and in Energy on 1st January?

☐ 2: 3
☐ 9: 13
☐ 9: 14
☐ 10: 7
☐ 3: 2
Question 11

A client has a portfolio of shares in 5 companies and is reviewing their annual performance.

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Over a 3 year period, the price per share of Leisure is expected to show the same annual percentage change as it does in the first year. What is the expected price per share of Leisure at the end of the 3 year period?

☐ 307 pence
☐ 310 pence
☐ 337 pence
☐ 361 pence
☐ 408 pence
Question 12

This chart shows the annual profit made by two teams within a company over 5 years.

Over the period Year 1 to Year 4 (inclusive) what is the total profit for Team 1?

☐ £240,000
☐ £183,000
☐ £135,000
☐ £195,000
☐ £180,000
This chart shows the annual profit made by two teams within a company over 5 years.

What is the greatest difference between the profits made by the two teams in a year?

☐ £5,000
☐ £10,000
☐ £15,000
☐ £20,000
☐ £25,000
Question 14

This chart shows the annual profit made by two teams within a company over 5 years.

What is the average annual profit for Team 2 over the 5 year period?

- £46,000
- £48,000
- £50,000
- £230,000
- £240,000
Question 15

This chart shows the annual profit made by two teams within a company over 5 years.

Which of the following ratios best represents the ratio of profits between Team 1 in Year 2 and Team 2 in Year 4?

☐ 1: 2
☐ 2: 3
☐ 3: 4
☐ 8: 11
☐ 9: 11
Question 16

This chart shows the annual profit made by two teams within a company over 5 years.

What is the percentage increase in total profits between Year 2 and Year 3?

☐ 11.8%
☐ 10.0%
☐ 11.1%
☐ 25.0%
☐ 22.2%
Question 17

This chart shows the annual profit made by two teams within a company over 5 years.

Comparing each year, what is the smallest percentage contribution to annual profit made by Team 2?

☐ 40.0%
☐ 42.1%
☐ 43.8%
☐ 47.1%
☐ 47.8%
Question 18

This chart shows the annual profit made by two teams within a company over 5 years.

On the basis of the Year 5 profits a forecast is made for Year 6. It is predicted that Team 1 will increase their profits by 4% while Team 2’s profits will decrease by 4%. What will be the forecast for the percentage increase in total profits?

☐ 4%
☐ 0.21%
☐ 0%
☐ −0.21%
☐ −4%
**Question 19**

The table below shows the hours worked by five employees for a week. Any hours worked in excess of 35 are paid at ‘time and a half’.

<table>
<thead>
<tr>
<th>Employee</th>
<th>Grade</th>
<th>Hours</th>
<th>Gross Pay (£)</th>
<th>Deductions (£)</th>
<th>Net Pay (£)</th>
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<tr>
<td>Azhda</td>
<td>I</td>
<td>23</td>
<td>300</td>
<td>70</td>
<td>230</td>
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<tr>
<td>Bathusha</td>
<td>II</td>
<td>37</td>
<td>400</td>
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Which employee is paid the highest rate of pay per hour?

☐ Azhda

☐ Bathusha

☐ Chris

☐ Dean

☐ Emily
Question 20

The table below shows the hours worked by five employees for a week. Any hours worked in excess of 35 are paid at ‘time and a half’.

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Which employee has the smallest percentage of deductions from gross pay?

☐ Azhda

☐ Bathusha

☐ Chris

☐ Dean

☐ Emily
Question 21

The table below shows the hours worked by five employees for a week. Any hours worked in excess of 35 are paid at ‘time and a half’.

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For how many of the employees is Net Pay less than 80% of their Gross Pay?

☐ 1
☐ 2
☐ 3
☐ 4
☐ 5
Question 22

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A backdated pay rise increases total gross pay by 1.5%. Total Deductions increase by 2%. By what percentage does Total Net Pay increase?

☐ 0.25%
☐ 1.34%
☐ 1.36%
☐ 1.75%
☐ 2.51%
Question 23

The table below shows the hours worked by five employees for a week. Any hours worked in excess of 35 are paid at ‘time and a half’.

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Consider the total of overtime hours worked by these employees. What percentage is worked by Grade I workers?

☐ 33.33%
☐ 35.71%
☐ 36.36%
☐ 64.29%
☐ 66.67%
END OF TEST

This resource was produced by the sigma Network Employability Special Interest Group whose members are:

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