## Practice Tasks <br> Numerical Reasoning



How To Use This Document

## General Information

This document is designed to support you in preparing for your online numerical reasoning assessment.

It provides an overview of the assessment explaining what it measures and how it works.
It also provides 5 practice questions. After these practice questions, solutions and rationale have been provided to help you gain a deeper understanding. We would encourage you to attempt all the practice questions without looking at the solutions first.

## Numerical Reasoning

Aon's Numerical Reasoning assessment measures your aptitude for numerical reasoning. It measures your ability to analyse and understand numerical information and evaluate the truthfulness of statements on the basis of the given data. In the assessment, you will receive instructions along with some example questions that you can take as many times as you like before you start the actual assessment.

## How Does The Numerical Reasoning Assessment Work?

You are presented with multiple data sheets providing information in a numerical form. You are also presented with a series of statements. Your task is to evaluate these statements based on the information on the data sheets.
The information on the data sheets will not change during the test and each statement relates to only one data sheet. You need to find and refer to that data sheet.

Every statement has three answer options: TRUE, FALSE and CANNOT SAY. There is only one correct answer. You can navigate through the different statements but it is recommended to work on the tasks in the predefined order.

The test is preceded by specific examples to help you understand the system. Before you start the test, make sure you have a pen and paper as well as a calculator to hand.

## Guidance for the Practice Questions

The actual assessment you will take is timed, but you are not expected to answer all the questions you just need to work quickly and accurately, to try to get as many correct as possible in the time provided. As such, there is no specific time limit in the practice tests. Try to focus and complete them quickly in a single session.
You should write down your answers as you work through, so that you can compare your answers to the solutions at the end.

In the actual assessment there will be several data sheets you will need refer to. During the time limit, you are likely to become familiar with the different sheets and know which are useful when. For the purposes of these practice questions, you have been provided with the data sheet that the statement refers to.

To continue to practice, spend time trying to interpret tables and charts. You may wish to spend more time reviewing the example data provided here and asking yourself what it can tell you, and what it can't tell you.

## Practice Tasks

## Example 1

| Fiscal Year |  |  |  |
| :--- | :--- | :--- | :--- |
|  | Year 10 | Year 9 | Year 8 |
| Entertainment | 5,156 | 4,230 | 4,250 |
| Research | 15,240 | 8,960 | 7,256 |
| Marketing | 6,000 | 5,000 | 4,000 |
| Software | 7,230 | 6,250 | 5,256 |
| Energy | 248 | 150 | 170 |
| Travel | 260 | 340 | 360 |
| Total Costs | $\mathbf{3 4 , 1 3 4}$ | $\mathbf{2 4 , 9 3 0}$ | $\mathbf{2 1 , 2 9 2}$ | | All data in thousand dollars |  |
| :--- | :--- |

(?)
In Fiscal Year 8, research costs amounted to over \$7 million dollars.

TRUE
FALSE
CANNOT SAY

## Example 2



The total product revenue in the current year was $\$ 86$ million dollars.

Footwear and Accessories have a combined product revenue of $\$ 32$ million dollars.

Example 3


| Fiscal Year | Year 6 | Year 5 | Year 4 |
| :--- | :--- | :--- | :--- |
| Social Media | 10,005 | 9,345 | 8,990 |
| Newsletter | 3,500 | 4,620 | 5,620 |
| Billboards | 2,500 | 2,450 | 2,345 |
| Web Site | 1,254 | 1,500 | 1,367 |
| Leather Fairs | 20,000 | 17,670 | 16,564 |
| Fashion Shows | 10,376 | 8,345 | 7,891 |
| Other | 1,017 | 940 | 821 |
| Total | $\mathbf{4 8 , 6 5 2}$ | $\mathbf{4 4 , 8 7 0}$ | $\mathbf{4 3 , 5 9 8}$ |

Leads from Social Media was 6 \% higher in fiscal year 6 than in fiscal year 3.

Example 4

? In fiscal year 6 there were 1,500,000 more employees in North America than in fiscal year 5 .

Example 5

(?) The production forecast for Accessories is 2 million pieces more for fiscal year FY+3 compared to fiscal year FY+4.

TRUE
FALSE
CANNOT SAY

## Solutions \& Rationale

## Example 1 -Solution

| Fiscal Year |  |  |  | Year 10 |
| :--- | :--- | :--- | :--- | :--- |
| Entertainment | 5,156 | Year 9 | Year 8 |  |
| Research | 15,240 | 4,230 | 4,250 |  |
| Marketing | 6,000 | 8,960 | 7,256 |  |
| Software | 7,230 | 5,000 | 4,000 |  |
| Energy | 248 | 6,250 | 5,256 |  |
| Travel | 260 | 150 | 170 |  |
| Total Costs | $\mathbf{3 4 , 1 3 4}$ | $\mathbf{3 4 0}$ | 360 |  |

Statement: In Fiscal Year 8, research costs amounted to over $\$ 7$ million dollars.
Answer: True
Rationale: The answer can be found by locating Research and Year 8 in the table. Here you can see that the costs amounted to 7,256 .

We can also see that the numbers are provided in thousand US Dollars, therefore you need to multiply the given value with 1,000 . The result is 7,2 million, the statement is correct.

## Example 2 -Solution



## The total product revenue in the current year was $\$ 86$ million dollars.

Statement: Footwear and Accessories have a combined product revenue of $\$ 32$ million dollars.

## Answer: False

Rationale: You first need to identify the relevant information in the chart - Footwear and Accessories are two separate pieces of the chart.

You can see calculate that these total $45 \%$ of Product Revenue ( $38 \%+7 \%$ ).
Beneath the chart, you can also see the total Product Revenue is $\$ 86$ million dollars.
From here, you can calculate the exact amount, which is $45 \%$ of $\$ 86$ million dollars, which is 38.7 .
However, it may be quicker and easier to estimate the value. $45 \%$ is almost $50 \%$, which is half the overall figure. $50 \%$ of $\$ 86$ million is $\$ 43$ million dollars. This is quite different from the $\$ 32$ million dollars in the statement. As such, this statement is likely to be false.

## Example 3 - Solution

| LEAD GENERATION |  |  |  |
| :--- | :--- | :--- | :--- |
|  | Fiscal Year | Year 6 | Year 5 |
| Social Media | 10,005 | 9,345 | Year 4 |
| Newsletter | 3,500 | 4,620 | 8,990 |
| Billboards | 2,500 | 2,450 | 5,620 |
| Web Site | 1,254 | 1,500 | 2,345 |
| Leather Fairs | 20,000 | 17,670 | 1,367 |
| Fashion Shows | 10,376 | 8,345 | 16,564 |
| Other | 1,017 | 940 | 7,891 |
| Total | 48,652 | 44,870 | 821 |

Statement: Leads from Social Media was 6\% higher in fiscal year 6 than in fiscal year 3.

## Answer: Cannot Say

Rationale: The table does not provide data for fiscal year 3 and therefore we cannot say whether the revenue from Accessories was 6\% higher in fiscal Year 6 than in fiscal year 3.
Remember, all information can be found on a single data sheet - you do not need to compare data across multiple sheets of information.

## Example 4 - Solution



Statement: In fiscal year 6 there were 1,500,000 more employees in North America than in fiscal year 5

## Answer: False

Rationale: Once we have located North America in the chart, we need to calculate the difference in employees between fiscal year 5 and fiscal year 6.

The correct calculation is $3850-2300=1550$. The key on the side of the chart shows that this is in thousands, so this represents $1,550,000$ more employees. This means the statement is false. The figures are close, but the statement was not asking for an approximation.

## Example 5 - Solution



Statement: The production forecast for Accessories and Clothing is 2 million pieces more for fiscal year $\mathrm{FY}+3$ compared to fiscal year $\mathrm{FY}+4$.
Answer: Cannot Say
Rationale: We can see that there is information for Accessories in $\mathrm{FY}+3,33$ million pieces.
However, there is no information for $\mathrm{FY}+4$. As such, we cannot say what the increase would be.

