

# Student Manual



# **ExonlineX**

**Carlos Santos Silva** 

**Alexandra Moutinho** 

**Ana Moura Santos** 

Pedro Rosado Dias

January 2021 (v2.2)

## **VERSION CONTROL**

Version	Date	Changes
V2.2	24/1/21	First english version (from Portuguese version 2.2)

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### **PREFACE**

The ExonlineX project started in the academic year 2019/2020 within the scope of the "Pedagogical Innovation Projects" initiative of the Pedagogical Council of IST. It aims to implement online exams using the MOOC Técnico platform (exams.elearning.tecnico.ulisboa. pt).

During the second period of 2019-2020, within the scope of the state of exception introduced by COVID-19, an update was made to the base platform that introduces new features, robustness and security. Thus, since June 2020 the platform started to operate in a new autonomous domain exams.elearning.tecnico.ulisboa.pt.

This manual, made for the students of the curricular units, intends to describe step by step the process of registering on the platform and answers to the exams (assessment tests) online.

Carlos Santos Silva

carlos.santos.silva@tecnico.ulisboa.pt

Alexandra Moutinho

alexandra.moutinho@tecnico.ulisboa.pt

Ana Moura Santos

ana.moura.santos@tecnico.ulisboa.pt

Pedro Rosado Dias

pedro.rosado.dias@tecnico.ulisboa.pt

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# 1 THE PLATFORM MOOC TÉCNICO

### 1.1 Register/Login

The ExonlineX Técnico platform (exams.elearning.tecnico.ulisboa.pt) is the online assessment development platform, developed on the IST platform for courses in the Massive Open Online Courses (MOOC) format. This platform was created from the Open edX platform, the open version of the edX platform.

Courses on the ExonlineX platform focus only on the evaluation component.

The platform has the possibility, during registration, to choose the base language used. In this manual it was decided to describe the platform in Portuguese.

1. Access the website exams.elearning.tecnico.ulisboa.pt (see Figura 1).

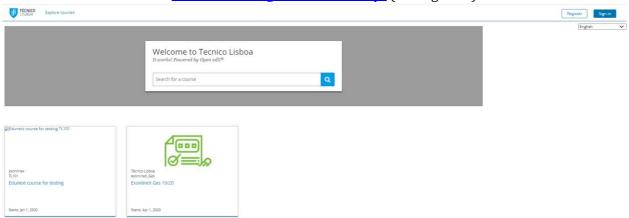


Figura 1 - Page with courses available on the MOOC Técnico platform

- 1. Choose the language (Português or English¹).
- 2. If you are not registered, please click in "**Register**". If you are already registered, go to step 7.
- 3. In the Register page (Figura 2), choose "Create an account using Tecnico ID".

As it is a platform for evaluations, it is not possible to register or enter the platform without using Técnico ID.

1

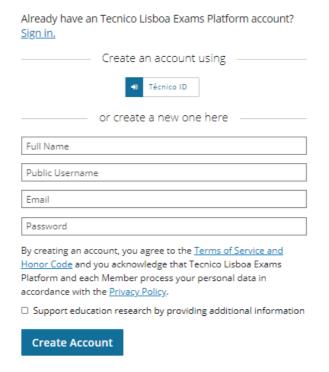


Figura 2 - Register page in the platform

4. Use the IST authentication method (Figura 3)



Figura 3 - Home page with IST credentials

5. In the following window (Figura 4), select "**Lembrar a minha escolha**" and then "**Aceitar**", to connect your IST profile with the Plataform.

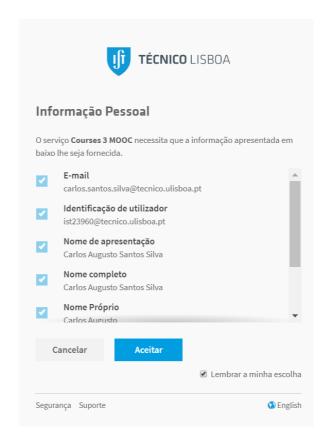


Figura 4 - Link page of the IST profile to the platform.

First time here? Create an Account.

- 6. After the registration, access the plataform in exams.elearning.tecnico.ulisboa.pt and choose "Iniciar Sessão"/Sign In.
- 7. Choose the option "**Tecnico ID**".

Sign In

Email

O endereço de email que usou para se registar em Tecnico Lisboa Exams Platform

Palavra-passe

Need help logging in?

Sign in

or sign in with

Figura 5 - Platform Login Page.

8. Log in using the IST authentication credentials.

Finally, you will have access to the "Courses" tab, where you will be able to view the ExonlineX course for which it was previously registered by the respective head of the UC, as well as the other courses in which you have registered on this platform (Figura 6). If you don't see the "Courses" tab, click on the Técnico Lisboa symbol in the upper left corner

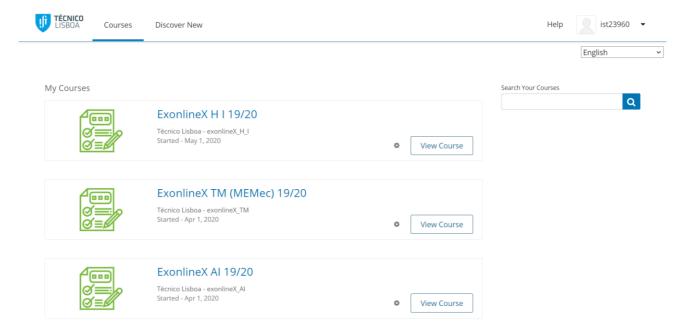


Figura 6 - Login page on the platform, after registration or entry.

If you are unable to view the course, contact the head of the UC and the MOOC Tecnico team (<a href="mailto:exonline@tecnico.ulisboa.pt">exonline@tecnico.ulisboa.pt</a>).

### 1.2 ExonlineX exame structure

To access an exam on ExonlineX, you have 3 tabs:

- COURSES (Figura 7)
- DISCUSSION (not available for exams)
- PROGRESS

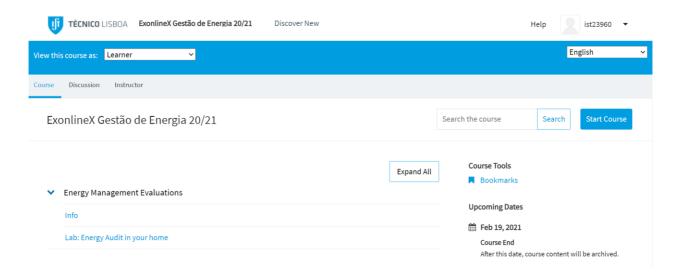


Figura 7 - Tab "COURSE" of the ExonlineX GENE 20/21

In the "COURSE" tab, you can see the different evaluation options available throughout the semester, as well as the respective closing date and time. Note that the time is given in WEST (Western European Standard Time), which corresponds to the Portuguese time, if you have selected that time zone in your preferences (click on your username in the upper right corner and choose Account  $\rightarrow$  Account Information  $\rightarrow$  Time Zone  $\rightarrow$  WEST)

To navigate through the various exam questions, you can, if necessary, use the navigation bar at the top (Figura 8).

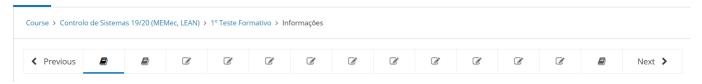


Figura 8 – Navigation bar on the exam on ExonlineX CS 19/20

Once the exam is complete, it may happen that it is no longer visible.

It is not possible to submit responses after the exam closes, even if it is visible.

### 1.3 ANSWERING EXAMS

### 1.3.1 Types of questions

There are several types of questions that can be used in the exam. The most common are:

### Checkboxes:

0	In this type of question <b>one or more options may be correct</b> . It is necessary to fill
	simultaneously all the correct options ( $\checkmark$ ) e leave the wrong options unfilled (
	<u> </u>

### • Dropdown Menu:

In this type of question only one option is correct in the menu (
 Select an option
 ).

### • Multiple choice:

In this type of question only one option is correct. I tis necessary to choose the correct option by filling in the button ( ) e automatically all the other options are unfilled ( ).

### Numerical Input:

o In this type of question, it is necessary to introduce a number in the available answer box

2.5

- Below the answer box, there is another box that shows the validation of the resul (
   2.5
- The decimal separator is the "." (dot) and not the "," (coma).
- You should follow the suggestion regarding the number of decimal places to use in the answer. Although the teacher can define some error tolerance, it is necessary to comply with the instructions given.
- The introduction of non-numeric characters invalidates the answer, except in some particular cases. For details, see the section Erro! A origem da referência não foi e ncontrada..

### • Text Input:

O In this type of question you need to insert text (string) in the available box (
resposta

- The professor can define the answer as "sensitive" or not, to lowercase / uppercase characters. Check the indications given.
- In general, synthetic and well-defined responses are expected. The validation method is not robust to misspellings, accents or complete sentences.

### • Mathematic Expression:

o In this type of question, it is necessary a mathematical expression in the available box

```
R_1*R_2*(1/R_3)
```

o Below the answer box there is a box that represents represents that mathematical

expression to validate the expression ( 
$$R_1\cdot R_2\cdot\left(rac{1}{R_3}
ight)$$
 ) The introduction of mathematical expressions follows very

The introduction of mathematical expressions follows very specific rules of notation.
 For details, see section 1.5.

### 1.4 Numerical answer

There are several types of numbers that can be entered as an answer:

- Integers: 2520Fractional: 2/3Real (float): 3.14
- Real without integer: .98
- Scientific Notation:
  - To represent the real number **0.012** you can use the following symbols:
    - "^": 1.2\*10**^-**2
    - "e": 1.2e-2
  - To represent the real number **440,000**<sup>2</sup> you can use the following symbols:
    - "^": 4.4\*10**^**5
    - "e": **4.4e5**
- Constants:
  - o The platform allows the use of universal constants like:
    - "c" (light speed m/s) = 2.998\*10^8
    - "e" (Euler number) = **2.718...**
    - "g" (gravity acceleration m/s<sup>2</sup>) = **9.80**
    - "i" or "j" (Square root of -1): ex. **1.05+0.3\*i**
    - "k" (Boltzmann constant J/K) = 1.380649\*10^-23
    - "pi"  $(\pi) = 3.14159...$
    - "q" (electric charge in Coulomb) = **1.602\*10^-19**
    - "T" (positive difference between 0K e 0°C) = **273.15**
- Functions:
  - The platform allows the use of mathematical expressions like:
    - sqrt (square root): ex. sqrt(4)
    - log (logarithm base 10): ex. log10(3)
    - log2 (logarithm base 2): ex. log2(3)
    - In (I logarithm neper): ex. In(3)
    - exp (exponential): ex. exp(3)
    - abs (module): ex. abs(-3)
    - cos (cossin): ex. cos(3)
    - sin (sin): ex. sin(3)
    - tan (tangent): ex. tan(3)

<sup>&</sup>lt;sup>2</sup> Remember that in platform notation, the comma is the thousands separator.

arcsin (arc sin): ex. arcsin(0.5)

arccos (arc cossin): ex. arccos(0.5)

• ..

### 1.5 Introducing mathematical expressions

When entering questions for mathematical expressions, the syntax described in the following table must be taken into account:

Operation **Sintax Example Product** a\*b Divison a/b **Subtraction** a-b Addition + a+b **Priority** 0 (a+b) (a+b)^-12 **Power** Sin sin sin(a) Square root sqrt sqrt(a) Neper number exp(a) exp Logarithm base 2 log2 log2(a)**Logarithm base 10** log10 log10(a) Neper logarithm ln ln(a) Module abs abs(a)

Tabela 1 – Sintax to introduce mathematical expressions

### 1.6 Submitting an answer

After choosing the correct option or entering the number or mathematical expression, it is necessary to submit the answer for evaluation.

At the end of each problem, the options listed in Figura 9 may be available:

- "Submit" Only responses submitted are considered for evaluation. Otherwise, even if the answers given are correct, they are not evaluated. It is essential to press this button before the end of the test for all answers;
- "You have used X of Y attempts" this message indicates the number of possible submissions (2 in this case) and how many have already been used. In this case, as the "Submit" button has not yet been selected, "0" attempts were used, so there is no data available for correction;
- "Save" this button allows you to save responses without submitting. In this way it is possible to answer other questions with the information of the saved answers, even if you change the page. However, answers that are saved but not submitted will not be evaluated, thus, it is mandatory to click in the button "Submit".
- "Reset" this button allows you to delete responses that have not yet been submitted. It may not be visible.

• **"Show answer"** – this button may never be visible, be visible after the test is completed or after the responses have been submitted (or even before the submission in the case of formative assessments).



Figura 9 - Answers options

### 1.7 File submission

In case there is a question that requires the submission of a file with complementary information for the evaluation (see example in Figure 10), the following sequence of steps must be done:

- 1. Write a short text in the Your Response box (for example "Resolution") in the text box. This option may be optional as in the example ("optional"), it may be mandatory ("Required") or it may not be available.
- 2. Choose the file for submission by clicking on the "Choose File" or "Browse" button.
- 3. It is mandatory to write a short text about the attached file (see instructions given by the teacher).
- 4. Click on the "Upload files" button. Please note that only pdf files or image files (png, jpg) can be accepted, so you should read the instructions provided by the teacher. If the upload was successful, you can check the content of the submitted file by clicking on the respective link. You can also delete the submitted file.
- 5. Click on the button "Submit your response and move to the next step".
- 6. If you do not do any of the steps, it is not possible to complete the question submission.

If the submission is successful, the status of the submission should be **"You have completed this assignment"**. Your final grade will be available when the assessments of your response are complete - Figura 11.

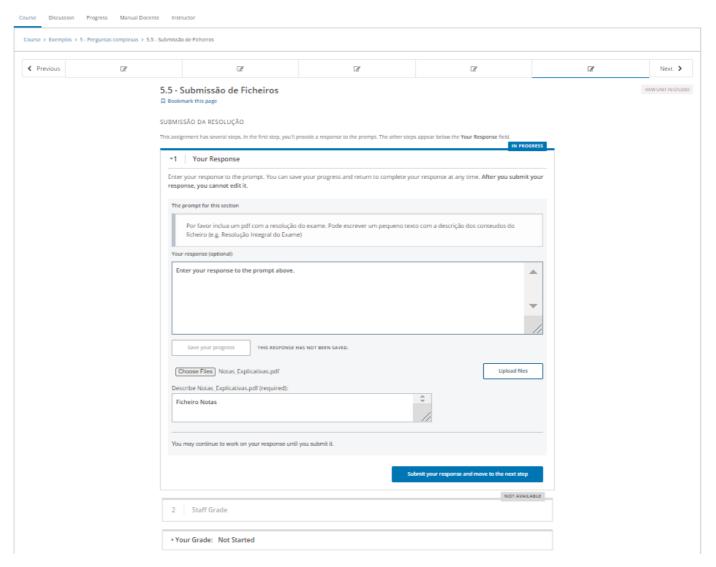


Figura 10 – Window for file submission

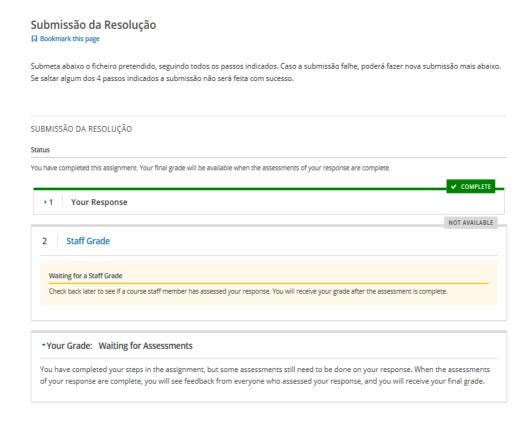


Figura 11 – Window that confirms file submission

### 1.8 Timed questions

It is possible that there are questions with a time limit to answer, a limit that only starts to count when you start to answer. These questions are flagged as follows:

# Perguntas temporizadas Timed Exam None

Figura 12 - Timed question

When you enter the question, you receive a warning that the question is timed (Figura 13). To proceed, you must select the option "I am ready to start my timed exam".

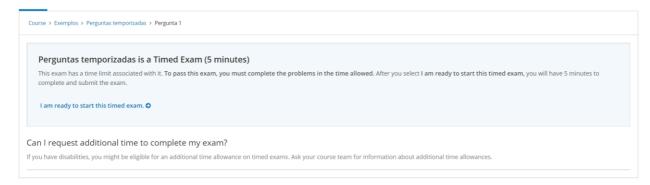


Figura 13 - Timed questions: step 1

Then answer the questions (in this case Question 1 and 2, as shown in Figura 14 and Figura 15 respectively). As can be seen, the remaining time is indicated at the top, as well as the indication that there is a time limit for resolution and that it is necessary to submit responses. After completing all responses, you must click on "End my Exam".

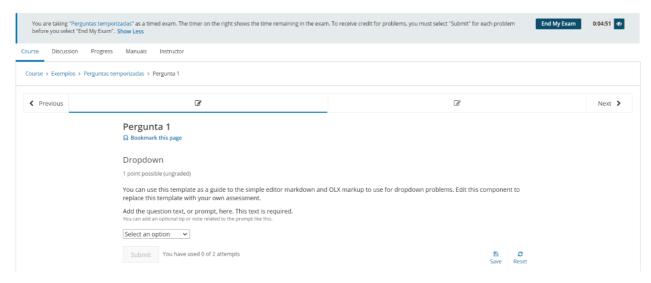


Figura 14 - Timed questions: step 2

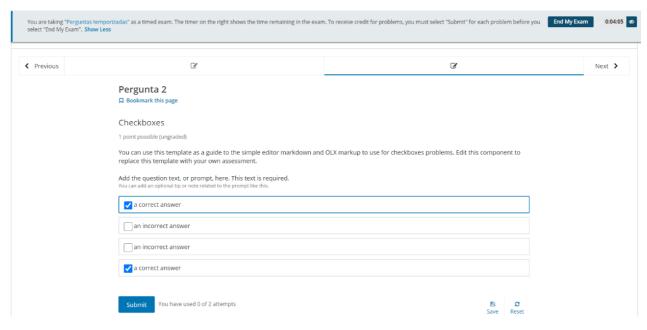


Figura 15 - Timed questions: step 3

After clicking on "End my Exam" (which in practice only refers to this specific question), a window appears (Figura 16), in case there is still time available, asking:

- if you really want to finish option "Yes, submit my timed exam" -
- if you prefer to continue to review the questions "No, I want to continue working".

In case "Yes, submit my timed exam" is selected, the window of Figura 17 is opened, otherwise it returns to the questions (Figura 15ou Figura 16).

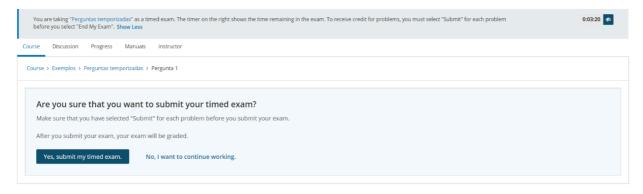


Figura 16 - Timed questions: step 4

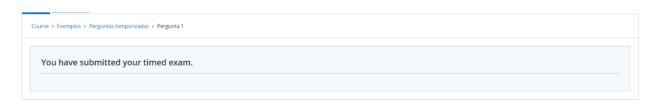


Figura 17 - Timed questions: step 5

### 1.9 Questions with precedence

It is possible to define questions whose answer depends on the answer to previous questions. The view of these questions with precedence is represented in Figura 18, where it is indicated that the question "Question with precedence" has as a prerequisite the answer to the question "Previous question".

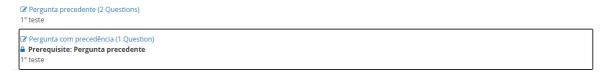


Figura 18 - Window with question with precedence

After selecting the preceding question, all questions included must be answered (see Figura 19 and Figura 20). Note that accessing the question with precedence may imply answering all questions correctly or having an intermediate quote or even without an intermediate quote, it may be necessary to answer a minimum number of points.

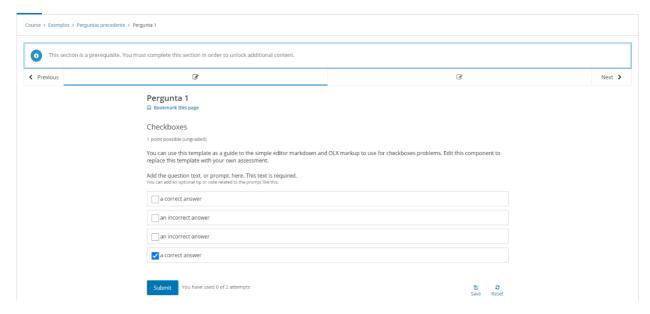


Figura 19 - Question with precedence: step 1

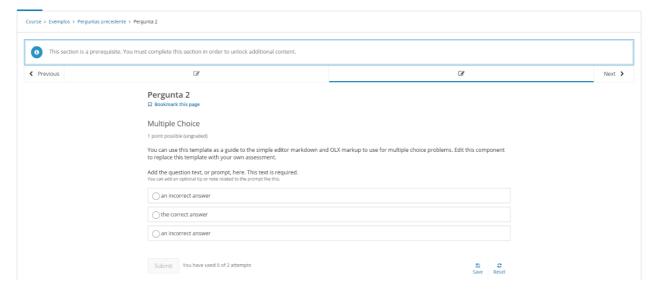


Figura 20- Question with precedence: step 2

As long as the requirements for unlocking are not met, the view of the question with precedence will be the one indicated in Figura 21.



Figura 21 - Question with precedence: step 3

### 1.10 Linked questions in the same question block

Within the same question, it is possible to have several paragraphs in separate blocks - for example two multiple choices or a multiple choice question and a numeric entry - or to have a single block with several paragraphs - multiple multiple choices or multiple choices a numeric entry.

### 1.10.1 Linked questions with multiple blocks

In this case, the answer to each question is asked individually in each block (see Figura 22). In this type of question, the quotations for each block can be different;

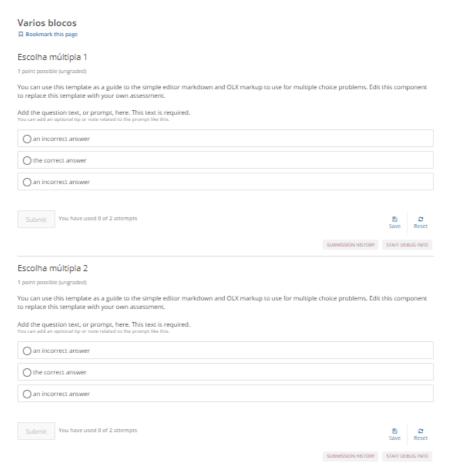


Figura 22 - Linked questions with multiple blocks

### 1.10.2 Linked question in only one block

In this case, **only a single submission of responses can be made within the block** (Figura 24). In this type of question, the quotation for each block is evenly distributed among the subsets of questions. In the case of Figura 24, as there are two subsets, the quotation will be distributed at 50% for each.

In this case, it is not possible to answer just one of the blocks (if there is at least one question of multiple choice or selection), that is, the "Submit" button is not available until all the items are answered.

Therefore, you must always answer one of the options or, if available, choose the option "I don't know / I don't answer". Otherwise, the "Submit" button will not be available.

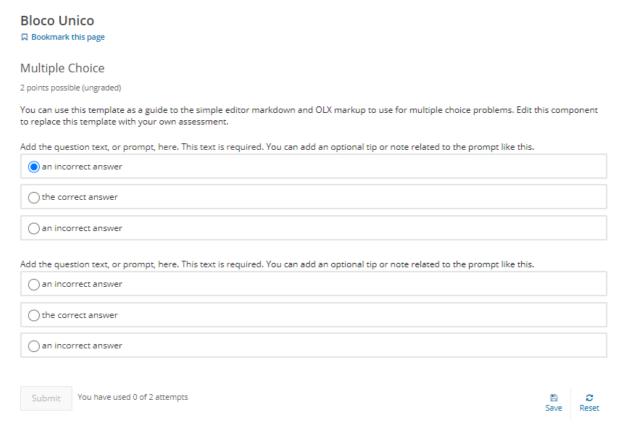


Figura 23 – Linked question with a single block. The "Submit" button is not yet available because one of the questions remains to be answered.

You have used 0 of 2 attempts

Submit

# Bloco Unico Bookmark this page Multiple Choice 2 points possible (ungraded) You can use this template as a guide to the simple editor markdown and OLX markup to use for multiple choice problems. Edit this component to replace this template with your own assessment. Add the question text, or prompt, here. This text is required. You can add an optional tip or note related to the prompt like this. an incorrect answer the correct answer Add the question text, or prompt, here. This text is required. You can add an optional tip or note related to the prompt like this. an incorrect answer the correct answer the correct answer an incorrect answer an incorrect answer

Figura 24 – Linked question with a single block. The "Submit" button because both questions have already been answered.

Save

### 2 TROUBLESHOOTING

### 2.1 The "Submit" submission button is not available

- In questions with different points, it is necessary to answer at least one (in the case of numerical entry) or all (in the case of multiple choices) for the button to be available; In this case, see the instructions provided by the teachers (for example, answer a very high number in the numerical entry or choose the option "I don't know / I don't answer" in multiple choices.
- The deadline for delivering the answer has ended and therefore it is no longer possible to answer the question.

### 2.2 I saved the answers but i did not submit them before the exam is over

• The questions are not recorded are not rated.

### 2.3 I cannot see the formulas in the questions

Questions that include mathematical formulas use the "MathJax" library (in javascript language) which is used for visual math expressions written using syntactic notation called MathLM.

In case the question has elements with formulas created in MathJax, the expression "Math Processing Error" may appear (ver a Figura 25).

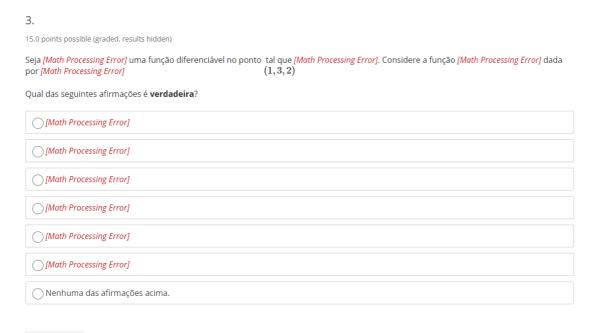


Figura 25 - Example error window for questions using mathematical formulas

Este erro pode ocorrer pelos seguintes motivos:

- Use of antivirus and anti-malware software that block access to content on the Internet that they have classified as malicious. They can also prevent the browser from executing Javascript code.
- Add-Ons in browsers that prevent the execution of Javascript such as "NoScript", "ScriprBlock" or "Sybu Javascript Blocker", to give some examples.

- Some add-ons for browsers, blocking advertising may also have unwanted effects. For example, "AdBlock Plus", "AdBlock", "uBlock Origin", "AdGuard", among others.
- Version conflicts of this library within the Browser cache;
- Internet access extraordinarily slow.

### 2.4 I cannot submit the files

- Check that the file extension is correct;
- Check that the file size is less than 10MB. If necessary, compress files;
- You did not enter text in the file description box (see **point** Erro! A origem da referência não foi encontrada.**, secção** Erro! A origem da referência não foi encontrada.)
- You did not enter a response in the text box, if it is mandatory (**see Figura 10** it is marked as optional, but if it is defined with "Required", it is mandatory to answer)