

Family Name:

Given Name:

University:

Department:

ParisTech Number:

Scientific Test : 1st Part

Mathematics and applied mathematics

DO NOT OPEN THE BOOKLET BEFORE BEING INVITED

Instructions:

- You have **1h30** for answering this first part of the test composed of **25 questions**.
- Each question or statement of this test is followed by **five** suggested answers or completions. Select the one that is the best in each case and then mark the corresponding box on the answer sheet. **Beware, multiple answers will be considered as wrong.**
- For each question, a level of difficulty (+, ++ or +++) is indicated. All candidates are expected to answer question of lower difficulty (+). Only students from a math department are expected to answer questions of higher difficulty (+++).
- +1 point for a right answer, -1/4 for a wrong answer, 0 for no answer.
- **All material** must be given back at the end of the test.
- No separate rough drafts allowed; use the back of the subject pages as rough drafts.
- Do not remove the staple of the booklet.
- Mobile phones must be switched off.
- Calculators and electronic dictionaries are not allowed.
- Bilingual paper dictionaries are accepted if they do not contain any formula.
- Write your name(s), department and university on the first page of the booklet.

Please read carefully the instructions to fill out the answer sheets of the written test

You must fill the sheet preferably with a **black pen**; a blue pen is acceptable if you don't have a black one. **Pencils and red or green pens are forbidden.**

Fill in the box corresponding to your answer, blackening it completely.

Correct:

	A	B	C	D	E
1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Wrong:

27	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
28	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

If you make a mistake: leave the box corresponding to your answers dark and indicate at the end of the line the letter of the answer you validate.

82	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	B
----	--------------------------	-------------------------------------	--------------------------	--------------------------	-------------------------------------	---

If you gave an answer and at the end you decide not to give any answer to the question : leave the box darkened and darken another one on the line and indicate at the end of the line "NR" for no reply.

109	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	NR
-----	--------------------------	--------------------------	-------------------------------------	--------------------------	-------------------------------------	----

Write your full family name, as it is indicated in your passport, in latin characters, and then your given name, the name of your university, and the name of your school or of your department.

Fill the candidate number by darkening the corresponding boxes.
For example, if your candidate number is 90259, darken 9 in the first column, 0 in the second column, 2 in the third column, etc.

**ParisTech Number/
Numéro ParisTech**

<input type="checkbox"/> 0	<input checked="" type="checkbox"/> 0	<input type="checkbox"/> 0	<input type="checkbox"/> 0	<input type="checkbox"/> 0
<input type="checkbox"/> 1	<input type="checkbox"/> 1	<input type="checkbox"/> 1	<input type="checkbox"/> 1	<input type="checkbox"/> 1
<input type="checkbox"/> 2	<input type="checkbox"/> 2	<input checked="" type="checkbox"/> 2	<input type="checkbox"/> 2	<input type="checkbox"/> 2
<input type="checkbox"/> 3	<input type="checkbox"/> 3	<input type="checkbox"/> 3	<input type="checkbox"/> 3	<input type="checkbox"/> 3
<input type="checkbox"/> 4	<input type="checkbox"/> 4	<input type="checkbox"/> 4	<input type="checkbox"/> 4	<input type="checkbox"/> 4
<input type="checkbox"/> 5	<input type="checkbox"/> 5	<input type="checkbox"/> 5	<input checked="" type="checkbox"/> 5	<input type="checkbox"/> 5
<input type="checkbox"/> 6	<input type="checkbox"/> 6	<input type="checkbox"/> 6	<input type="checkbox"/> 6	<input type="checkbox"/> 6
<input type="checkbox"/> 7	<input type="checkbox"/> 7	<input type="checkbox"/> 7	<input type="checkbox"/> 7	<input type="checkbox"/> 7
<input type="checkbox"/> 8	<input type="checkbox"/> 8	<input type="checkbox"/> 8	<input type="checkbox"/> 8	<input type="checkbox"/> 8
<input checked="" type="checkbox"/> 9	<input type="checkbox"/> 9	<input type="checkbox"/> 9	<input type="checkbox"/> 9	<input checked="" type="checkbox"/> 9

Remember: only one good answer for each question.