For a CPU the “READ value from memory at 4711” instruction looks like this (μOPs):

1. Check that program may read from address
2. Store the value at address in register[1]

MELTDOWN & SPECTRE FOR NORMAL PEOPLE

“READ” INSTRUCTION

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[1] Register: The CPUs scratchpad


1

2

If 1 fails the program is aborted.

This can be handled by the program.

In our burger example:

1. Customer orders a burger
2. Customer has not enough money
3. Customer does not get his burger

“READ” INSTRUCTION

For a CPU the “READ value from memory at 4711” instruction looks like this (μOPs):

1. Check that program may read from address 1
2. Store the value at address in register[1] 2

If 1 fails the program is aborted.

This can be handled by the program.

In our burger example:

1. Customer orders a burger
2. Customer has not enough money
3. Customer does not get his burger

[1] Register: The CPUs scratchpad

MELTDOWN: READING FORBIDDEN DATA

Meltdown basically works like this:

- READ secret from forbidden address
  1. Check that program may read from address
  2. Store the read value in register
- Stash away secret
  1. *Magic*
- *Retrieve secret (later)*

µOPs: 1 2 1