2a.

It is the modulo operator which returns the remainder of a integer division.

The answer to 42%5 = 2

2b.

You can use it to determine whether a number is odd or even.

3a: What is the difference between pinMode(PIN, INPUT) and pinMode(PIN, INPUT PULLUP)?

INPUT is a floating input that needs an external pull up or pull down in order to be a logical input, where the INPUT\_PULLUP has an internal pull-up resistor that pulls the signal high, and the input is often active low when a pull up is present.

3b: How often do your program check if the button has been pushed? Does this seem reasonable?

It is checking it all the time, which is not ideal if we want to do other things as well.

3c: What is the operator ! used for?

It is used as a logical NOT operator.

4a: Would you be able to remake the circuit in a week without any documentation?

Yes, no problem.