and field instead of manipulating pointers). You don't have to go crazy to hit this – mainly avoid the combo of bubble sort + swapping data instead of pointers.

Regarding floats: You'll be using floating-point MIPS instructions, which are different from the integer ones we learned. Like many processors, MIPS considers floating point separate from the "real" CPU; it's instead "co-processor 1". You can find floating-point-specific operations are here, but if you want to get data in/out of the floating point unit or to take branching decisions based on floating point comparisons, you'll need instructions like mtc1 (\underline{m} ove \underline{t} o \underline{c} oprocessor $\underline{1}$), bc1t (\underline{b} ranch if \underline{c} oprocessor $\underline{1}$ comparison is \underline{t} rue), etc., which are described \underline{h} ere. Also, the different floating point registers have different roles similar to the integer registers (caller-saved, callee-saved, etc.); these are distinguished on the second page of \underline{t} this document. Lastly, as there is no load-immediate instruction for floats, the easiest way to specify a floating point constant such as π is to put it in memory as shown below and load it with 1.s:

You will upload BuildEff.s into GradeScope. The following tests cases are provided. The input for each test comes from the file listed in the Input file column. To manually reproduce a test, each line in the file should be typed in individually.

Test#	Parameter Passed	Expected output file	What is Tested
0	tests/BuildEff_input_0.txt	tests/BuildEff_expected_0.txt	One pizza
1	tests/BuildEff_input_1.txt	tests/BuildEff_expected_1.txt	Two pizzas, in order
2	tests/BuildEff_input_2.txt	tests/BuildEff_expected_2.txt	Two pizzas, out of order
3	tests/BuildEff_input_3.txt	tests/BuildEff_expected_3.txt	Six pizzas
4	tests/BuildEff_input_4.txt	tests/BuildEff_expected_4.txt	Ensure we stop reading at "DONE"
5	tests/BuildEff_input_5.txt	tests/BuildEff_expected_5.txt	Correct output with diameter of zero
6	tests/BuildEff_input_6.txt	tests/BuildEff_expected_6.txt	Correct output with cost of zero
7	tests/BuildEff_input_7.txt	tests/BuildEff_expected_7.txt	100 pizzas, some stats are zero