Review the lab sheet first, then respond to the problems below.

Problem 1

Given this sequence of RPN operations, what is the expected result (all values shown in decimal):
`1 3 + 5 * 6 - 3 +`

- a. 3
- b. 10
- c. 11
- d. 14
- e. 15
- f. 17

Problem 2

Given this sequence of RPN operations, what is the expected result (all values shown in decimal):
`6 7 4 8 + * 6 - +`

- a. 12
- b. 25
- c. 39
- d. 40
- e. 84
- f. 132

Problem 3

Given this sequence of register accesses, what is the expected value (stored in the register file's backing memory) of register 5 on the rising clock edge of cycle 3. All values are given in decimal.

cycle #	write enable	write address	write data
0	0	5	37
1	1	4	28
2	1	5	54
3	1	5	32

- a. 28
- b. 32
- c. 37
- d. 54
- e. undefined
- f. 3

Problem 4

Given this sequence of register accesses, what is the expected value of read data 1 on the rising clock edge cycle 5 (assuming read address 1 is locked to 7). All values are given in decimal.

cycle #	write enable	write address	write data
0	0	6	32
1	1	5	17
2	0	7	53
3	1	4	24
4	1	7	35
5	1	7	77

- a. 32
- b. 17
- c. 53

- d. 24
- e. 35
- f. 77

Problem 5

Given the following sequence of RPN operations, what value will be shown on the hex displays on the rising clock edge of cycle 4? All values are given in decimal. Assume the user is a super-humanly fast robot that presses one KEY per clock cycle. Assume the first value is entered on cycle 0.

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24 5 2 - * 4 + 6 3 - +
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- a. 24
- b. 5
- c. 2
- d. 67
- e. 72
- f. 4

