

Homework 1

Your task is to read two integers from the standard input, apply certain operations on them and print the result. The operation is unique to each student. You can find your dedicated formula at the end of this document.

Your code **must** comply with the following rules:

- You can only use the EAX, EBX, ECX, EDX, ESI and EDI registers.
- You are not allowed to use the memory/Data segment.
- You must use the **read_int** and **print_int** functions (from the textbook) for I/O.
- You can only use the commands you have learned so far in the class. You cannot use MUL, IMUL, jump instructions, etc.
- You MUST NOT PRINT ANY REDUNDANT DATA.

Results are checked by Script.

Remember that your code will be tested for similarity. In the case of cheating the student will receive a **negative** mark. It is your responsibility to protect your code.

Please upload **only** the “.asm” file on courses.kntu.ac.ir.

Example:

If input numbers are 2 and 5 and your formula is

$$((\text{input1} + 28) * 7) - (\text{input2} - 79) * 2$$

then the output number will be:

$$((2 + 28) * 7) - (5 - 79) * 2 = 358$$

Hint: Try to break each multiplier into powers of 2. For example

$$x * 11 = x * 8 + x * 2 + x * 1$$

| ID | formula | Example | | |
|---------|----------------------------------------------|---------|---------|--------|
| | | input 1 | input 2 | output |
| 9697943 | $((input2 + 81) * 10) + (input2 - 82) * 5$ | 3 | 5 | 3915 |
| 9819933 | $((input2 + 38) - ((input1 * 6) + 96)) * 7$ | 3 | 5 | -497 |
| 9820933 | $((input2 + 20) * 8) - (input1 - 31) * 3$ | 3 | 5 | 684 |
| 9820963 | $((input1 + 71) * 6) - (input2 - 83) * 4$ | 3 | 5 | 2088 |
| 9726723 | $((input1 * 6) + 17) + (input2 - 55) * 2$ | 3 | 5 | -30 |
| 9826463 | $((input1 + 74) - ((input2 * 7) + 72)) * 5$ | 3 | 5 | -150 |
| 9726933 | $((input2 - 84) + ((input1 + 92) * 4)) * 6$ | 3 | 5 | 1806 |
| 9826933 | $((input2 - 65) + ((input1 + 74) * 6)) * 6$ | 3 | 5 | 2412 |
| 9822573 | $((input1 + 55) - ((input2 * 4) + 13)) * 5$ | 3 | 5 | 125 |
| 9823013 | $((input1 * 8) - 81) - (input2 + 63) * 4$ | 3 | 5 | -500 |
| 9826713 | $((input2 - 56) + ((input1 + 42) * 4)) * 6$ | 3 | 5 | 774 |
| 9823253 | $((input1 * 9) - 96) - (input2 + 26) * 4$ | 3 | 5 | -400 |
| 9823383 | $((input2 + 74) * 7) + (input1 - 46) * 3$ | 3 | 5 | 1530 |
| 9823483 | $((input1 + 78) * 8) - (input2 - 102) * 2$ | 3 | 5 | 1490 |
| 9826543 | $((input2 + 85) * 4) + (input1 - 88) * 3$ | 3 | 5 | 825 |
| 9823613 | $((input1 + 19) - ((input2 * 5) + 108)) * 5$ | 3 | 5 | -555 |
| 9826433 | $((input2 + 81) * 5) + (input1 - 82) * 3$ | 3 | 5 | 1053 |
| 9824153 | $((input1 + 88) - ((input2 * 7) + 96)) * 5$ | 3 | 5 | -200 |
| 9824353 | $((input1 + 20) * 8) - (input2 - 31) * 2$ | 3 | 5 | 420 |
| 9826703 | $((input1 + 71) * 4) - (input2 - 83) * 2$ | 3 | 5 | 748 |
| 9526923 | $((input2 + 38) * 8) + (input1 - 78) * 3$ | 3 | 5 | 807 |
| 9824773 | $((input1 + 71) - ((input2 * 8) + 47)) * 5$ | 3 | 5 | -65 |
| 9640753 | $((input1 + 26) * 4) - (input2 - 49) * 2$ | 3 | 5 | 320 |
| 9826903 | $((input2 + 46) * 6) + (input1 - 75) * 3$ | 3 | 5 | 702 |
| 9930263 | $((input1 * 9) + 28) + (input2 - 106) * 2$ | 3 | 5 | -92 |
| 9825073 | $((input2 - 51) + ((input1 + 66) * 5)) * 6$ | 3 | 5 | 1794 |
| 9632213 | $((input1 + 22) - ((input2 * 5) + 49)) * 5$ | 3 | 5 | -245 |
| 9825663 | $((input1 * 5) + 82) + (input2 - 94) * 2$ | 3 | 5 | 16 |
| 9826483 | $((input1 * 6) + 63) + (input2 - 35) * 2$ | 3 | 5 | 102 |