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a)

Use a sentinel-controlled loop to read 10 positive numbers

Compute and display their sum.

Location	Number	Instruction
00	+1012	Read A
01	+2012	Load A
02	+4100	Branch negative to 00
03	+3013	Add B
04	+2113	Store B
05	+2014	Load C
06	+3115	Subtract D
07	+4209	Branch zero to 10
08	+2114	Store C
09	+4000	Branch to 00
10	+1113	Write B
11	+4300	Halt
12	+0000	Variable A (input = 0)
13	+0000	Variable B (sum = 0)
14	+0000	Variable C (counter = 10)
15	+0000	Variable D (1)

b)

Use a counter-controlled loop to read seven numbers, some positive and some negative, and compute and display their average.

Location	Number	Instruction
00	+1015	Read A
01	+2015	Load A
02	+3016	Add B
03	+2116	Store B
04	+2017	Load C
05	+3018	Add D
06	+2117	Store C
07	+3119	Subtract E
08	+4210	Branch zero to 10
09	+4000	Branch to 00
10	+2016	Load B
11	+3219	Divide E
12	+2116	Store B
13	+1116	Write B
14	+4300	Halt
15	+0000	Variable A (input = 0)
16	+0000	Variable B (sum,average = 0)
17	+0000	Variable C (counter = 0)
18	+0000	Variable D (1)
19	+0000	Variable E (7)

c)

Read a series of numbers, and determine and display the largest number.
The first number read indicates how many numbers should be processed.

Location	Number	Instruction
00	+1016	Read A
01	+1017	Read B
02	+1018	Read C
03	+2018	Load C
04	+3117	Subtract B
05	+4108	Branch negative to 08 (if B > C)
06	+2018	Load C
07	+2117	Store B
08	+2019	Load D
09	+3020	Add E
10	+2119	Store D
11	+3116	Subtract A
12	+4214	Branch zero to 14
13	+4002	Branch 02
14	+1117	Write B
15	+4300	Halt
16	+0000	Variable A (input number count)
17	+0000	Variable B (largest number)
18	+0000	Variable C (input)
19	+0000	Variable D (counter = 0)
20	+0000	Variable E (1)