

11 The table shows assembly language instructions for a processor that has one register, the Accumulator (ACC).

Label	Instruction		Explanation
	Opcode	Operand	
	LDM	#n	Load the number n to the ACC
	LDD	<address>	Load the contents of the location at the given address to ACC
	LDI	<address>	The address to be used is at the given address. Load the contents of this second address to the ACC.
	ADD	<address>	Add the contents of the given address to the ACC
	SUB	<address>	Subtract the contents of the given address from the ACC
	STO	<address>	Store the contents of the ACC at the given address
<label>:		<data>	Gives a symbolic address <label> to the memory location with the contents <data>
# denotes a denary number, e.g. #123 <label> can be used in place of <address>			

The current contents of memory are:

Address	Contents
150	26
300	86
420	150

Write **assembly language** code, using **only** the given instruction set to:

- store the contents of location 300 as labelled variable *A*
- store the contents of location 420 as labelled variable *B*
- add the value stored in the address contained in variable *B* to the value contained in variable *A*
- store the result in variable *Answer*.

Show the initialisation and values of the variables *A*, *B* and *Answer* in the table provided.

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Label	Content