

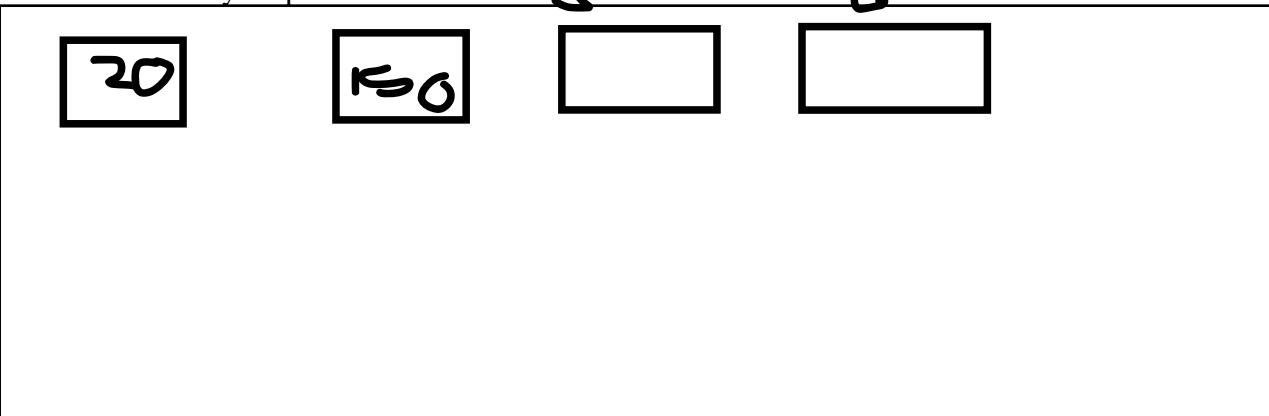
C Pointers and Pointer Arithmetic Worksheet

Use the following memory diagram and initializing code. For each of the following expressions give both the data type of the entire expression and the value of each (if an expression is impossible simply enter “error”). Remember an int is 4 bytes and a pointer is 8 bytes for this worksheet.

Name	Address	
var1	0xf120	
var2	0xf124	
var3	0xf128	
var4	0xf130	

int var1 = 20;
int var2 = 150;
int *var3 = &var1;
int *var4 = &var1;

Draw the memory map for the stack below



Expression	Type	Value
*(&var2)	int	150
& (*var3)	int*	0xf120
(*var3) - 1		
&var3		
var3 = var3 + 1	int*	0xf124
*var3	int	150 (Considering the last one) var 2
*var3 = *var3 + 1	int	151
var3 = var3 + 1	int*	0xf128
*var3	int	
& (*var2)		