Problem B1 [10]

(i) [5] How many bytes do the following structures require in MIPS?

a) struct point { int x; int y; }
b) struct rectangle { struct point pt1; 
            struct point pt2; }
c) struct rectangleList { char *name; 
            struct rectangle rect; 
            struct rectangleList *next; }

(ii) [5] Suppose the following variables are declared in C code

float myf;
double *myd;
struct rectangleList mylist[100];
int distance;

Assuming that int type is 32 bit and that compiler does not align char data what is the value of distance for:

a) distance = (int) (mylist+5) – (int) mylist;
b) distance = (int) (&myf +1) – (int) &myf;
c) distance = (int) (myd + 2) - (int ) myd ;