Exercises

1. How large is the address space on a 32-bit computer?

2. An 8086 chip has 20 address pins. How much physical memory can it support? MS-DOS reserved addresses above 0xA0000 for video memory and ROM. How much RAM could the system support?

3. On an 8086 system, suppose the ds register contains 0x2A00.
   The instruction \texttt{mov ds: [0x18F4], ax} stores the value of the ax register into memory.
   At what physical address will it store ax?

4. For the built-in malloc on turing, small requests are returned from the heap, and large requests get their own memory area. How large does a request need to be to get its own memory area? (You can use the malloc\_test demo program to figure this out).