Drive Capacities

1 bit = “0” or “1”

1 byte (8bits) = 8 bits (1 character)

1 kilobyte (KB) = 1024 bytes (2^{10})

1 megabyte (MB) = 1024 kilobytes (2^{20})

1 gigabyte (GB) = 1024 megabytes

1 terabyte (TB) = 1024 gigabytes

A Kilobyte is 1,024 Bytes

You would think that since the prefix “kilo” typically means 1,000, that kilobyte would have 1,000 bytes.

The reality is that since computers store data using the binary system, and the binary system is based on powers of 2, the actual number of bytes is 1,024.

You can see this when you look at how the power of 2’s works:

2^0 = 1 2^1 = 2 2^2 = 4 2^3 = 8 2^4 = 16 2^5 = 32 2^6 = 64

2^7 = 128 2^8 = 256 2^9 = 512 2^10 = 1024

The first binary value that represents 1,000 bytes is 1,024. Therefore, a kilobyte contains 1,024 bytes.