



# James S. Huggins' Refrigerator Door

Home

Front Door

My Ephemerae

Stuff About Me  
Hugginisms

Form Script

Privacy  
Technology

WebMastering  
MS

Cherokee  
U-2 Spy Plane

Humor  
Motivation

Books  
Quotations  
Other Stuff

Misc Links  
Ephemerae

Memberships  
Site Awards  
Affiliates

NSA & NSA/NT  
Toastmasters

Webrings

Snippets/Ezine  
Guestbook

Site Map

Email Me

Search

## How Much Data Is That?

**Note:** *The information shown below uses measures only associated with data. For example, a kilo-anything is 1000 . . . except that when it is a kilobyte, it is 1024, an even power of two. See my page on this topic here.*



Whenever we discuss quantities of data, we tend to do it in the abstract. We speak of a kilobyte, or a megabyte or a gigabyte without really knowing what it represents.

The following table shows various quantities of bytes, in each power of ten. Usually, they are shown with multiples of 2 and 5 also. For example, 1 Kilobyte, 2 Kilobytes, 5 Kilobytes.

All the examples are *approximate* and are *rounded*. For example, a computer card has 80 columns. If 50 columns contain data on a card, then two cards will be 100 bytes. Also, a 3-1/2 inch diskette can contain 1.4 Megabytes. Showing it as 1 Megabyte reflects both (a) the diskette not typically being filled and (b) rounding. Finally, a CD-ROM can hold more than 500 Megabytes. However, it is listed at that level as "typical" and as the closest match.

### Bytes (8 bits)

- 0.1 bytes: A single yes/no decision (actually 0.125 bytes, but I rounded)
- 1 byte: One character
- 2 bytes:
- 5 bytes
- 10 bytes: One word (a word of language, not a computer word)
- 20 bytes:
- 50 bytes:
- 100 bytes: Telegram; two punched computer (Hollerith) cards
- 200 bytes:
- 500 bytes:

### Kilobyte

**Tip Jar**

**Snippets**  
a free ezine

**Ezine Privacy**



Apr. 2003 to  
Apr. 2009



1,024 bytes;  $2^8$ ;  
approx. 1,000 or  $10^3$

- 1 Kilobyte: Joke; (very) short story
- 2 Kilobytes: Typewritten page
- 10 Kilobytes: Page out of an encyclopedia
- 20 Kilobytes:
- 50 Kilobytes: Image of a document page, compressed
- 100 Kilobytes: Photograph, low-resolution
- 200 Kilobytes: Two boxes (4000) punched computer (Hollerith) cards
- 500 Kilobytes: Five boxes, one case (10,000 of punched computer (Hollerith) cards

## Megabyte

1,048,576 bytes;  $2^{20}$ ;  
approx 1,000,000 or  $10^6$

- 1 Megabyte: Small novel; 3-1/2 inch diskette
- 2 Megabytes: Photograph, high resolution
- 5 Megabytes: Complete works of Shakespeare; 30 seconds of broadcast-quality video
- 10 Megabytes: Minute of high-fidelity sound; digital chest X-ray; Box of 3-1/2 inch diskettes
- 20 Megabytes: Two boxes of 3-1/2 inch diskettes
- 50 Megabytes: Digital mammogram
- 100 Megabytes: Yard of books on a shelf; two encyclopedia volumes
- 200 Megabytes: Reel of 9-track tape; IBM 3480 cartridge tape
- 500 Megabytes: CD-ROM

## Gigabyte

1,073,741,824 bytes;  $2^{30}$ ;  
approx 1,000,000,000 or  $10^9$

- 1 Gigabyte: Paper in the bed of a pickup; symphony in high-fidelity sound; broadcast quality movie
- 2 Gigabytes: 20 yards of books on a shelf
- 5 Gigabytes: 8mm Exabyte tale
- 10 Gigabytes:
- 20 Gigabytes: Audio collection of the works of Beethoven; five Exabyte tapes; VHS tape used to store digital data
- 50 Gigabytes: Library floor of books on shelves
- 100 Gigabytes: Library floor of academic journals on shelves; large ID-1 digital tape
- 200 Gigabytes: 50 Exabyte tapes

## Terabyte

