

| Decimal term | Abbreviation | Value       | Binary term | Abbreviation | Value     | % Larger |
|--------------|--------------|-------------|-------------|--------------|-----------|----------|
| kilobyte     | KB           | $1000^1$    | kibibyte    | KiB          | $2^{10}$  | 2%       |
| megabyte     | MB           | $1000^2$    | mebibyte    | MiB          | $2^{20}$  | 5%       |
| gigabyte     | GB           | $1000^3$    | gibibyte    | GiB          | $2^{30}$  | 7%       |
| terabyte     | TB           | $1000^4$    | tebibyte    | TiB          | $2^{40}$  | 10%      |
| petabyte     | PB           | $1000^5$    | pebibyte    | PiB          | $2^{50}$  | 13%      |
| exabyte      | EB           | $1000^6$    | exbibyte    | EiB          | $2^{60}$  | 15%      |
| zettabyte    | ZB           | $1000^7$    | zebibyte    | ZiB          | $2^{70}$  | 18%      |
| yottabyte    | YB           | $1000^8$    | yobibyte    | YiB          | $2^{80}$  | 21%      |
| ronnabyte    | RB           | $1000^9$    | robibyte    | RiB          | $2^{90}$  | 24%      |
| queccabyte   | QB           | $1000^{10}$ | quebibyte   | QiB          | $2^{100}$ | 27%      |

**FIGURE 1.1 The  $2^x$  vs.  $10^y$  bytes ambiguity was resolved by adding a binary notation for all the common size terms.** In the last column we note how much larger the binary term is than its corresponding decimal term, which is compounded as we head down the chart. These prefixes work for bits as well as bytes, so *gigabit* (Gb) is  $10^9$  bits while *gibibits* (Gib) is  $2^{30}$  bits. The society that runs the metric system created the decimal prefixes, with the last two proposed only in 2019 in anticipation of the global capacity of storage systems. All the names are derived from the entymology in Latin of the powers of 1000 that they represent.