Memorize base 10 equivalents:
2<sup>x</sup> for x = 0, 1, 2, 3, 4, 5, 6, 7, 8, 10, 15, 16, and (approximately) 20, 30, 31 and 32
16<sup>x</sup> for x = 0, 1, 2, 3, 4
Prefixes “kilo-”, “mega-”, “giga-” and “tera-” for data sizes and rates

Unsigned, Variable Length Integer Data:
Convert

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Arithmetic
Add and subtract in decimal, hexadecimal, and binary.

Unsigned, Fixed Length Integer Data:
Convert

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Arithmetic
Add and subtract in decimal, hexadecimal, and binary.
Detect unsigned overflow.

Signed (2’s complement) Fixed Length Integer Data:
Convert

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Arithmetic
Add and subtract in decimal, hexadecimal, and binary.
Form the negative (2’s complement) of numbers expressed in binary and hexadecimal.
Sign-extend a 2’s complement number to a longer length.
Detect signed and unsigned overflow.

Character Data
Convert ASCII to integer format and vice-versa.
Know layout of ASCII table: Control characters, printable characters, digits, uppercase letters, lowercase letters.
CR, LF, or CR-LF?

Logical Data
Bit operations NOT, AND, OR, EOR.