

What does the acronym **ASCII** stand for?

CompData

What does the acronym **UTF** stand for?

CompData

What symbol represents a bitwise **inverse**?

Binary Logic

What bitwise operation is represented by **|**?

Binary Logic

What symbol represents a bitwise **or**?

Binary Logic

What bitwise operation is represented by **^**?

Binary Logic

What symbol represents a bitwise **xor**?

Binary Logic

What bitwise operation is represented by **&**?

Binary Logic

What symbol represents a bitwise **and**?

Binary Logic

What bitwise operation is represented by **~**?

Binary Logic

**Unicode
Transformation
Format**

**American
Standard
Code for
Information
Interchange**

Bitwise Or

~

aka, tilde

Bitwise Xor

|

aka, pipe

Bitwise And

^

aka, caret

Bitwise Invert

&

aka, ampersand

What number **system** has a **radix** of **10**?

CompData

What is the **radix** for the **hexadecimal** number system?

CompData

What number **system** has a **radix** of **16**?

CompData

What is the **radix** for the **octal** number system?

CompData

What number **system** has a **radix** of **8**?

CompData

In scientific notation, What is another term for a number's **mantissa**?

CompData

Given a positive integer, how do you **represent** its **negative** in **two's complement**.

CompData

For ASCII values, What is the **decimal** value of the **'0'** **character**?

(The number zero, not the null value.)

ASCII

For ASCII values, What is the **hex** value of the **'0'** **character**?

(The number zero, not the null value.)

ASCII

For ASCII values, What **character** has the **hex** value **0x30**?

ASCII

ANSWER

16

$\mathbb{N}(\text{hex}) = \{0, 1, 2, 3, 4, 5, 6, 7, 8, 9, A, B, C, D, E, F\}$

ANSWER

Decimal

$\mathbb{N}(\text{dec}) = \{0, 1, 2, 3, 4, 5, 6, 7, 8, 9\}$

ANSWER

8

$\mathbb{N}(\text{oct}) = \{0, 1, 2, 3, 4, 5, 6, 7\}$

ANSWER

Hexadecimal

$\mathbb{N}(\text{hex}) = \{0, 1, 2, 3, 4, 5, 6, 7, 8, 9, A, B, C, D, E, F\}$

ANSWER

Significand

ANSWER

Octal

$\mathbb{N}(\text{oct}) = \{0, 1, 2, 3, 4, 5, 6, 7\}$

ANSWER

48

ANSWER

Invert the number's bits
and then
subtract 1

ANSWER

'0'

ANSWER

0x30

For ASCII values,

What is the **decimal**
value of the
'a'
character?

ASCII

For ASCII values,

What is the **hex** value of the
'a'
character?

ASCII

For ASCII values,

What is the
value difference
between 'A' and 'a'?

Absolute value
Hex or decimal

ASCII

For ASCII values,

What **character** is the
decimal value
97?

ASCII

For ASCII values,

What is the decimal
value of the
'A'
character?

ASCII

For ASCII values,

What is the **hex** value of the
'A'
character?

ASCII

For ASCII values,

What **character** is the
decimal value
65?

ASCII

For ASCII values,

What is the **decimal**
value of the
'\r'
character?

ASCII

For ASCII values,

What is the **hex** value of the
'\r'
character?

ASCII

For ASCII values,

What character is the
decimal value
13?

ASCII

ANSWER

0x61

ANSWER

97

ANSWER

'a'

ANSWER

32
(in decimal)

OR

0x20
(in hexadecimal)

ANSWER

0x41

ANSWER

65

ANSWER

13

ANSWER

'A'

ANSWER

'\r'

ANSWER

0xD

The return carriage character.

For ASCII values,
What is the **decimal**
value of the
'\n'
character?

ASCII

For ASCII values,
What is the **hex** value of the
'\n'
character?

ASCII

For ASCII values,
What **character** is the
decimal value
10?

ASCII

For ASCII values,
What is the
decimal value of the
null terminator
character?

ASCII

For ASCII values,
What is the **decimal**
value of the
' '
character?

The space character

ASCII

For ASCII values,
What is the **hex** value of the
' '
character?

The space character

ASCII

For ASCII values,
What **character** is the
decimal value
32?

ASCII

For ASCII values,
What is the **decimal**
value of the
'\t'
character?

ASCII

For ASCII values,
What is the **hex** value of the
'\t'
character?

ASCII

For ASCII values,
What **character** is the
decimal value
9?

ASCII

ANSWER

0xA

ANSWER

10

ANSWER

0

ANSWER

'\n'

The newline character
AKA: linefeed

ANSWER

0x20

ANSWER

32

ANSWER

9

ANSWER

' '

The space character

ANSWER

'\t'

ANSWER

0x9

The tab character.

The tab character.

What **endianess**
are **internet** protocols?

(At least traditionally)

CompData

What **endianess**
are **x86/x64** machines?

CompData

For IEEE-754,
what is the total **bit count**
of a
half precision float?

CompData

For IEEE-754,
what is the **exponent bias**
in a
half precision float?

CompData

For IEEE-754,
how many **exponent** bits
are in a
half precision float?

CompData

For IEEE-754,
how many **significand** bits
are in a
half precision float?

CompData

For IEEE-754,
what is the total **bit count**
of a
single precision float?

CompData

For IEEE-754,
what is the **exponent bias**
in a
single precision float?

CompData

For IEEE-754,
how many **exponent** bits
are in a
single precision float?

CompData

For IEEE-754,
how many **significand** bits
are in a
single precision float?

CompData

ANSWER

Little Endian

ANSWER

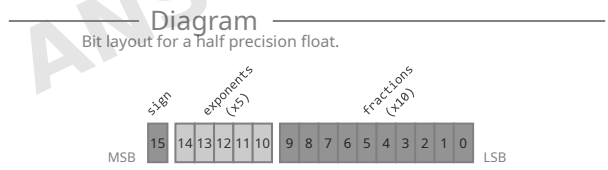
Big Endian

ANSWER

15

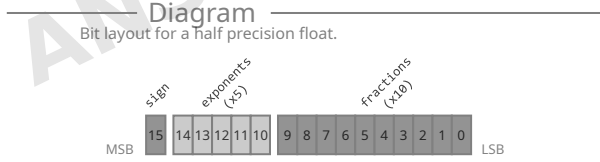
ANSWER

16



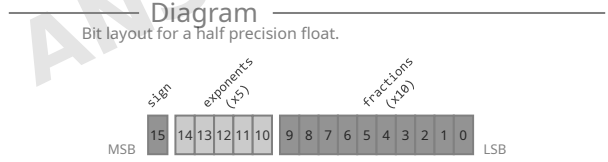
ANSWER

10



ANSWER

5



ANSWER

127

ANSWER

32

ANSWER

23

ANSWER

8

For IEEE-754,
what is the total **bit count**
of a
double precision float?

CompData

For IEEE-754,
what is the **exponent bias**
in a
double precision float?

CompData

For IEEE-754,
how many **exponent** bits
are in a
double precision float?

CompData

For IEEE-754,
how many **significand** bits
are in a
double precision float?

CompData

For IEEE-754,
what is the total **bit count**
of a
quad precision float?

CompData

For IEEE-754,
what is the **exponent bias**
in a
quad precision float?

CompData

For IEEE-754,
how many **exponent** bits
are in a
quad precision float?

CompData

For IEEE-754,
how many **significand** bits
are in a
quad precision float?

CompData

What **specification**
defines
floating point data types?

CompData

What is
IEEE-754?

CompData

ANSWER

1023

ANSWER

64

ANSWER

52

ANSWER

11

ANSWER

16383

ANSWER

128

(Give yourself credit if ~16,000)

ANSWER

112

ANSWER

15

The specification
that defines
floating point data types.

ANSWER

IEEE-754

ANSWER

What is the **radix** for the **binary** number system?

CompData

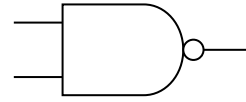
What number **system** has a **radix** of **2**?

CompData

What is the **radix** for the **decimal** number system?

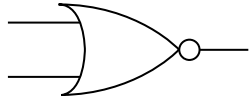
CompData

What does this logic gate symbol represent?



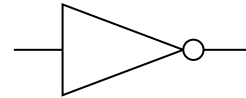
CompData

What does this logic gate symbol represent?



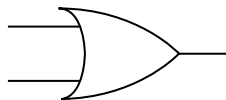
CompData

What does this logic gate symbol represent?



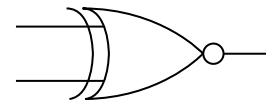
CompData

What does this logic gate symbol represent?



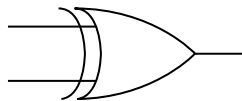
CompData

What does this logic gate symbol represent?



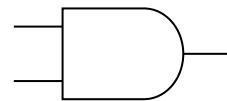
CompData

What does this logic gate symbol represent?



CompData

What does this logic gate symbol represent?



CompData

ANSWER

Binary

$\mathbb{N}(\text{bin}) = \{0, 1\}$

ANSWER

2

$\mathbb{N}(\text{bin}) = \{0, 1\}$

ANSWER

A NAND gate

ANSWER

10

$\mathbb{N}(\text{dec}) = \{0, 1, 2, 3, 4, 5, 6, 7, 8, 9\}$

ANSWER

A NOT gate

ANSWER

A NOR gate

ANSWER

An XNOR gate

ANSWER

An OR gate

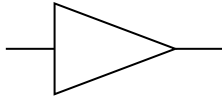
ANSWER

An AND gate

ANSWER

An XOR gate

What does this logic gate symbol represent?



CompData

What does the organization acronym **BSI** stand for?

CompData

What does the organization acronym **IEEE** stand for?

CompData

What does the organization acronym **ISO** stand for?

CompData

What does the organization acronym **ITU** stand for?

CompData

What does the organization acronym **ANSI** stand for?

CompData

What power of 2 gives 4096?

i.e., $2^? = 4096$?

Power Of 2s

What power of 2 gives 8192?

i.e., $2^? = 8192$?

Power Of 2s

What is the value of 2^{13} ?

As a decimal value

Power Of 2s

What is the value of 2^{14} ?

As a decimal value

Power Of 2s

**British
Standards
Institution**

A Buffer

**International
Organization for
Standardization**

**Institute of
Electrical and
Electronics
Engineers**

**American
National
Standards
Institute**

**International
Telecommunication
Union**

13

12

16384

8192

What power of 2 gives
16384?

i.e., $2^? = 16384$?

Power Of 2s

What is the value of
 2^{15} ?

As a decimal value

What power of 2 gives
32768?

i.e., $2^? = 32768$?

Power Of 2s

What is the value of
 2^{16} ?

As a decimal value

What power of 2 gives
65536?

i.e., $2^? = 65536$?

Power Of 2s

What is the value of
 2^{32} ?

As a decimal value

What power of 2 gives
4,294,967,296?

i.e., $2^? = 4,294,967,296$?

Power Of 2s

What is the value of
 2^0 ?

As a decimal value

What power of 2 gives
1?

i.e., $2^? = 1$?

Power Of 2s

What is the value of
 2^1 ?

As a decimal value

ANSWER

32768

ANSWER

14

ANSWER

65536

ANSWER

15

ANSWER

4,294,967,296

ANSWER

16

i.e., a little over 4 billion.

ANSWER

1

ANSWER

32

ANSWER

2

ANSWER

0

What power of 2 gives
2?

i.e., $2^? = 2$?

Power Of 2s

What is the value of
 2^2 ?

As a decimal value

What power of 2 gives
4?

i.e., $2^? = 4$?

Power Of 2s

What is the value of
 2^3 ?

As a decimal value

What power of 2 gives
8?

i.e., $2^? = 8$?

Power Of 2s

What is the value of
 2^4 ?

As a decimal value

What power of 2 gives
16?

i.e., $2^? = 16$?

Power Of 2s

What is the value of
 2^5 ?

As a decimal value

What power of 2 gives
32?

i.e., $2^? = 32$?

Power Of 2s

What is the value of
 2^6 ?

As a decimal value

ANSWER

4

ANSWER

1

ANSWER

8

ANSWER

2

ANSWER

16

ANSWER

3

ANSWER

32

ANSWER

4

ANSWER

64

ANSWER

5

What power of 2 gives
64?

i.e., $2^? = 64$?

Power Of 2s

What is the value of
 2^7 ?

As a decimal value

What power of 2 gives
128?

i.e., $2^? = 128$?

Power Of 2s

What is the value of
 2^8 ?

As a decimal value

What power of 2 gives
256?

i.e., $2^? = 256$?

Power Of 2s

What is the value of
 2^9 ?

As a decimal value

What power of 2 gives
512?

i.e., $2^? = 512$?

Power Of 2s

What is the value of
 2^{10} ?

As a decimal value

What power of 2 gives
1024?

i.e., $2^? = 1024$?

Power Of 2s

What is the value of
 2^{11} ?

As a decimal value

ANSWER

128

ANSWER

6

ANSWER

256

ANSWER

7

ANSWER

512

ANSWER

8

ANSWER

1024

ANSWER

9

ANSWER

2048

ANSWER

10

What power of 2 gives
11?

i.e., $2^? = 11$?

Power Of 2s

What is the value of
 2^{12} ?

As a decimal value

What **multiple**
is the prefix
kilo?

ASCII

What **multiple**
is the prefix
mega?

CompData

What **multiple**
is the prefix
micro?

CompData

What **multiple**
is the prefix
milli?

CompData

What **multiple**
is the prefix
nano?

CompData

What **multiple**
is the prefix
peta?

CompData

What **multiple**
is the prefix
pico?

CompData

What **multiple**
is the prefix
tera?

CompData

ANSWER

4096

ANSWER

2048

ANSWER

1,000,000s
i.e., 10^6

ANSWER

1,000s
i.e., 10^3

Millions

Thousands

ANSWER

0.001
i.e., 10^{-3}

ANSWER

0.000001
i.e., 10^{-6}

Thousandths

Millionths

ANSWER

1,000,000,000,000,000s
i.e., 10^{15}

ANSWER

0.000000001
i.e., 10^{-9}

Quadrillions

Billionths

ANSWER

1,000,000,000,000s
i.e., 10^{12}

ANSWER

0.000000000001
i.e., 10^{-12}

Trillions

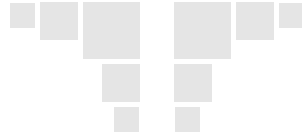
Trillionths



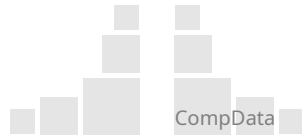
What **multiple**
is the prefix
zetta?



CompData



What **multiple**
is the prefix
exa?



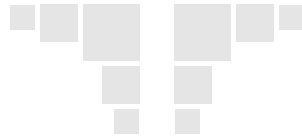
CompData



What **multiple**
is the prefix
femto?



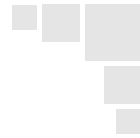
CompData



What **multiple**
is the prefix
giga?



ASCII



1,000,000,000,000,000,000s
i.e., 10^{18}

Quintillions

1,000,000,000,000,000,000,000s
i.e., 10^{21}

Sextillions

1,000,000,000s
i.e., 10^9

Billions

0.00000000000000000000001
i.e., 10^{-15}

Quadrillionths