恭喜！您通过了！

通过条件 80% 或更高

坚持学习

成绩 95%

Binary

总分：5

1. Which of these is a valid byte? Check all that apply. 0.75/1 分

- [ ] 10022011
- [x] 11011011

正确
Great job! A byte is composed of eight bits of zeros and ones.

- [x] 00000000

正确
Great job! A byte is composed of eight bits of zeros and ones.

- [x] 11100

这个选项的答案不正确
Not quite. This is not correct because the number does not contain 8 values. Remember that a byte contains 8 bits.

2. How many possible values can we have with 8 bits? 1/1 分

- (•) 256
- ( ) 8
- ( ) 1 byte
- ( ) 127

正确
Great job! Bits use the binary system, which is also known as the base-2 numeral system. So 2^8 allows us 256 values from 0 to 255.

3. Why did UTF-8 replace the ASCII character-encoding standard? 1/1 分

- ( ) ASCII can represent emoji.
- ( ) ASCII can store a character in more than one byte.
- ( ) UTF-8 only uses 128 values.
- (•) UTF-8 can store a character in more than one byte.

正确
Wohoo! UTF-8 replaced the ASCII character-encoding standard because it can store a character in more than a single byte. This allowed us to represent a lot more character types, like emoji.

4. What is the highest decimal value we can represent with a byte? 1/1 分

- ( ) 256
- (•) 255
- ( ) 2
- ( ) Any number

正确
Correct! There are 256 values in a byte, from the decimal number 0 to 255.

5. The binary value of the ASCII letter "c" is 0110 0011. Using the handy chart that we learned in the lesson, convert this number to its decimal value. You'll need to use some math for this question. 1/1 分

- ( ) 100
- ( ) 45
- (•) 99
- ( ) 123

正确
Great job! The decimal value 99 is same as the binary value 0110 0011. So the numbers that are turned ON are 64, 32, 2, and 1 and added up together. In other words, 64 + 32 + 2 + 1 = 99.