

Name: _____

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4-1 & 4-2 Worksheet

Page 1

Question 11 - Multiple Choice

Points: 1

A precise set of instructions used to encrypt and decrypt data is called:

- A) Byte
- B) Compiler
- C) Algorithm
- D) Transistor

Question 6 - Multiple Choice

Points: 1

What is the decimal value of the binary number 10000110?

- A) 134
- B) 130
- C) 132
- D) 128

Question 3 - Multiple Choice

Points: 1

In binary, the number 1 represents

- A) On
- B) Error
- C) Reset
- D) Off

Question 2 - Multiple Choice

Points: 1

A bit is also known as a:

- A) Algorithm
- B) Byte
- C) Cipher
- D) Binary Digit

Question 5 - Multiple Choice

Points: 1

What number system uses only 0 and 1?

- A) Decimal
- B) Binary
- C) Roman Numeral
- D) Hexadecimal

Question 14 - True/False

Points: 1

Computers understand electrical signals called bits.

A) True

B) False

Question 13 - Multiple Choice

Points: 1

What is the biggest advantage of a One-Time Pad?

A) It uses many small keys

B) It's free

C) It is easy to use

D) It's unbreakable

Question 4 - Multiple Choice

Points: 1

How many bits make up one byte?

A) 8

B) 2

C) 16

D) 1

Question 17 - True/False

Points: 1

Cryptanalysis is the process of attempting to break a cryptographic system.

A) True

B) False

Question 16 - True/False

Points: 1

A One-Time Pad key can be reused many times.

A) True

B) False

Question 9 - Multiple Choice

Points: 1

Which term refers to unencrypted data?

A) Ciphertext

B) Algorithm

C) Plaintext

D) Cryptanalysis

Question 7 - Multiple Choice

Points: 1

What is the decimal value of the binary number 01001101?

- A) 134
- B) 74
- C) 65
- D) 77

Question 1 - Multiple Choice

Points: 1

What is a transistor?

- A) A compiler
- B) A tiny switch inside a computer
- C) A type of encryption key
- D) A binary number

Question 15 - True/False

Points: 1

ASCII uses binary numbers to represent keyboard characters.

- A) True
- B) False

Question 10 - Multiple Choice

Points: 1

Data that has been encrypted is called:

- A) Plaintext
- B) Binary
- C) Ciphertext
- D) Byte

Question 12 - Multiple Choice

Points: 1

Which encryption method replaces one character with a different character?

- A) Compilation
- B) Transposition
- C) Substitution
- D) Binary Conversion

Question 8 - Multiple Choice

Points: 1

What is cryptography?

- A) Programming software
- B) Scrambling data to protect information
- C) Deleting files permanently
- D) Building computer hardware

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4-3 Encoding Worksheet

Page 1

Question 2 - Multiple Choice

Points: 1

What is ASCII?

- A) Applies an algorithm to data input
- B) Hiding the intended meaning of communication
- C) Uses a base 16 number system (0-9, A-F)
- D) Associates keyboard characters with numerical values

Question 9 - True/False

Points: 1

Encoding and encryption are the same thing.

- A) True
- B) False

Question 1 - Multiple Choice

Points: 1

What is character encoding?

- A) Unauthorized transfer of data from a computer system
- B) Uses 0s and 1s to represent data
- C) Represents characters using a conversion system
- D) Associates keyboard characters with numerical values

Question 5 - Multiple Choice

Points: 1

What is the Base 64 encoding type?

- A) Applies an algorithm to data input
- B) Uses 64 printable characters and a formula
- C) Associates keyboard characters with numerical values
- D) Uses 0s and 1s to represent data

Question 3 - Multiple Choice

Points: 1

What is binary encoding?

- A) Uses 0s and 1s to represent data
- B) Associates keyboard characters with numerical values
- C) Represents characters using a conversion system
- D) Uses a base 16 number system (0-9, A-F)

Question 7 - Multiple Choice

Points: 1

What is obfuscation?

- A) Hiding the intended meaning of communication
- B) Unauthorized transfer of data from a computer system
- C) Associates keyboard characters with numerical values
- D) Uses 0s and 1s to represent data

Question 12 - Multiple Choice

Points: 1

Which encoding type is commonly used to embed images or sound files into HTML and CSS?

- | | |
|-----------|----------------|
| A) Binary | B) Hexadecimal |
| C) ASCII | D) Base 64 |

Question 6 - Multiple Choice

Points: 1

What is hashing?

- A) Applies an algorithm to data input
- B) Represents characters using a conversion system
- C) Uses 64 printable characters and a formula
- D) Associates keyboard characters with numerical values

Question 8 - Multiple Choice

Points: 1

What is exfiltration?

- A) Applies an algorithm to data input
- B) Hiding the intended meaning of communication
- C) Unauthorized transfer of data from a computer system
- D) Uses a base 16 number system (0-9, A-F)

Question 10 - True/False

Points: 1

Hashing algorithms always produce the same size output regardless of input size.

- A) True
- B) False

Question 4 - Multiple Choice

Points: 1

What is hexadecimal encoding?

- A) Hiding the intended meaning of communication
- B) Uses 0s and 1s to represent data
- C) Uses a base 16 number system (0-9, A-F)
- D) Unauthorized transfer of data from a computer system

Question 11 - True/False

Points: 1

Encoding can be used for obfuscation.

- A) True
- B) False

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4-4 Steganography Worksheet

Page 1

Question 3 - Multiple Choice

Points: 1

How is steganography different from encryption?

- A) Steganography hides the existence of a message
- B) Encryption hides that a message exists
- C) Encryption only works on images
- D) There is no difference

Question 11 - True/False

Points: 1

There is a generic tool that works for extracting every steganography message.

- A) True
- B) False

Question 12 - True/False

Points: 1

Metadata is always intended to be secret.

- A) True
- B) False

Question 2 - Multiple Choice

Points: 1

Steganography is often called:

- A) Binary encryption
- B) Digital fingerprinting
- C) Security through obscurity
- D) Cybersecurity masking

Question 6 - Multiple Choice

Points: 1

What is metadata?

- A) A hidden virus
- B) A type of encryption key
- C) A secret message
- D) Information about a file

Question 8 - Multiple Choice

Points: 1

Binwalk is useful because it can:

- A) Edit photos
- B) Encrypt files
- C) Create metadata
- D) Search for embedded files and extract them

Question 9 - True/False

Points: 1

Steganography can be used in images, audio, and video files.

- A) True
- B) False

Question 5 - Multiple Choice

Points: 1

The hidden message must be:

- A) The same size as the carrier file
- B) Password protected
- C) Larger than the carrier file
- D) Smaller than the carrier file

Question 1 - Multiple Choice

Points: 1

What is steganography?

- A) A type of password manager
- B) A type of computer virus
- C) A method of deleting files permanently
- D) The practice of hiding messages so the message itself is hidden

Question 10 - True/False

Points: 1

Metadata may include information about when a file was created.

A) True

B) False

Question 4 - Multiple Choice

Points: 1

What is the most common place to hide text using steganography?

A) Spreadsheet

B) Images

C) Audio file

D) Database

Question 7 - Multiple Choice

Points: 1

What is one possible use of steganography?

A) All of these

B) Embedding secret files in public forums

C) Hiding copyright information in files

D) Sharing passwords secretly