



Name _____ Class _____ Date _____

AFTER THIS WORKSHEET YOU CAN

✓ Binary to decimal ✓ Decimal to binary ✓ Hex basics ✓ Why networking needs binary



Section A • Concept Check

• BEGINNER

4 × 1 = 4

1

Binary 1010 in decimal is:

- ☐ A. 10 ☐ B. 5 ☐ C. 12 ☐ D. 8

2

Decimal 255 in binary is:

- ☐ A. 1111111 ☐ B. 10000000 ☐ C. 11110000
☐ D. 10101010

3

Hex F equals decimal:

- ☐ A. 15 ☐ B. 16 ☐ C. 14 ☐ D. 155

4

IPv6 addresses are written in:

- ☐ A. hexadecimal ☐ B. octal ☐ C. roman
☐ D. base64



Section B • Problem Solving

• INTERMEDIATE

2 + 3 × 3 = 11

5

The 8 binary place values: 128, 64, 32, 16, 8, 4, 2, _____

6

Binary 11000000 = decimal _____

7

Convert 172 to binary.

8

Convert binary 11101110 to decimal.

9

Why must techs know binary for subnetting?



Section C • Challenge

• CHALLENGE

5

10

Convert hex 1F to decimal.

🧠 Reflection — the most useful thing I learned: _____

A ___/4 B ___/11 C ___/5 Total ___/20

Teacher's Signature

Parent's Signature

🔍 ANSWER KEY — FOLD OR CUT BEFORE HANDING OUT

1-A 2-A 3-A 4-A | 5 1 6 192 7 = 10101100 8 = 238 9 = Masks and network boundaries are defined at the bit level | 10 = 31