

IPv6
Addressing

Chapter: CCNA Networking • Level ★★★ • Time: 30 min

SCORE

___ / 20

Name _____ Class _____ Date _____

AFTER THIS WORKSHEET YOU CAN

✓ IPv6 format and shortening ✓ Address types: GUA, LLA ✓ SLAAC/DHCPv6 idea ✓ Why IPv6 exists



Section A • Concept Check

• BEGINNER

4 × 1 = 4

1 IPv6 addresses are:

- ☐ A. 128 bits ☐ B. 32 bits ☐ C. 64 bits
☐ D. 48 bits

2 Link-local addresses start with:

- ☐ A. FE80::/10 ☐ B. 2001:: ☐ C. FF00:: ☐ D. 10::

3 Double colon :: may appear:

- ☐ A. once per address ☐ B. twice
☐ C. anywhere freely ☐ D. never

4 IPv6 exists mainly because:

- ☐ A. IPv4 exhaustion ☐ B. speed
☐ C. color coding ☐ D. Wi-Fi



Section B • Problem Solving

• INTERMEDIATE

2 + 3 × 3 = 11

5 IPv6 is written in _____ hextets.

6 Global unicast commonly begins with _____::/3 range (2000).

7 Shorten 2001:0db8:0000:0000:0000:0000:0000:0001.

8 GUA vs LLA in one line?

9 Why does every IPv6 interface have an LLA?



Section C • Challenge

• CHALLENGE

5

10 What replaces broadcast in IPv6?

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 8 6 2000 7 = 2001:db8::1 8 = GUA: routable internet address; LLA: local-segment only (FE80) 9 = Local protocols (routing, NDP, gateway) run over it | 10 = Multicast (e.g. all-nodes FF02::1)

