



Name _____ Class _____ Date _____

AFTER THIS WORKSHEET YOU CAN

✓ ICMP purpose ✓ ping and traceroute ✓ Common ICMP messages ✓ ICMPv6 roles



Section A • Concept Check

• BEGINNER

4 × 1 = 4

- 1 ping uses ICMP:
- ☐ A. echo request/reply ☐ B. syn/ack
- ☐ C. get/post ☐ D. hello
- 2 traceroute maps the path using:
- ☐ A. TTL expiry messages ☐ B. DNS ☐ C. ARP
- ☐ D. cookies
- 3 Destination unreachable is an:
- ☐ A. ICMP message ☐ B. email ☐ C. frame
- ☐ D. port
- 4 ICMPv6 additionally handles:
- ☐ A. neighbor discovery / RA-RS ☐ B. file transfer
- ☐ C. NAT ☐ D. VLANs



Section B • Problem Solving

• INTERMEDIATE

2 + 3×3 = 11

- 5 ping tests _____ between two hosts.
- 6 Each traceroute hop replies with time-_____
- 7 ping works to IP but not to name – what's broken?

- 8 How does traceroute discover hop 3?

- 9 No ping reply – list 3 causes.



Section C • Challenge

• CHALLENGE

5

- 10 Which two ICMPv6 messages configure hosts?

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 reachability/connectivity 6 exceeded 7 = DNS resolution, not connectivity 8 = Sends packet with TTL=3; third router drops it and replies time-exceeded 9 = Host down, firewall blocking ICMP, routing/gateway issue | 10 = Router Solicitation and Router Advertisement