Solutions

Each answer shows the steps, then the **result**.

2.1

- setting up a **dedicated path** between the two ends, reserved for the **whole** communication

2.2

- splitting the message into **packets** that are sent **independently** across the network and reassembled at the destination

2.3

- any one: **reserved bandwidth**; in-order delivery; consistent/low latency once set up

2.4

- any one: **efficient** use of links (shared/multiplexed); **robust** (reroutes around failures); no slow setup

3.1

- any four: message split into **packets**
- each packet has **destination/source address** and a **sequence number**
- each packet routed **independently**, routers choose the next hop
- packets may take **different routes / arrive out of order**
- destination **reassembles** using sequence numbers / requests missing packets — max 4

3.2

- benefits (any two): reserved bandwidth; guaranteed in-order delivery; predictable latency
- drawbacks (any two): wastes capacity during silences; slow to set up; a single link failure cuts the whole circuit

3.3

- packet switching uses links **efficiently** (shared between many conversations)
- and is **robust** — it can reroute packets around a failed link, so the network keeps working