

Solutions

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

2.1

- no physical coins or notes
- **money that exists only in electronic form**

2.2

- a block stores three things
- **transaction data**, a **timestamp**, a **hash value**

2.3 any two:

- it does **not exist physically** / only used **electronically**
- it is **decentralised** – no bank controls it
- payments are **encrypted** / recorded in a **digital ledger**

2.4

- **blockchain**

3.1 B

- a blockchain is a **shared digital ledger copied across many computers**
- A is a private record; C is a cookie; D is software

3.2

(a)

- each block stores the **hash of the block before it**
- that **links the blocks into a chain**

(b)

- changing a block **changes its hash**
- it no longer matches the next block's stored hash, so the **chain breaks**

3.3

- **physically**
- **blockchains**
- **time-stamp**
- **traced**

3.4 one mark per point shown on the diagram (max 5):

- the buyer's device **encrypts** the payment
- the payment is sent to a **digital ledger** / network of computers
- the network **checks** the payment
- the payment is stored in a **block** with a **time-stamp**

- each block holds a **hash** and the **previous block's hash**
- the new block is **added to the blockchain**, copied to every computer