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200 XP

## **Knowledge check**

5 minutes

## Check your knowledge

- 1. Suppose a refrigeration truck freezer fails during shipment to the ice cream shop. The ice cream in the shipment melts. The freezer is repaired and the ice cream refreezes before delivery. How would the ice cream shop know if the shipment is out of compliance?
  - The shipment is out of compliance temporarily. However, when the freezer is repaired, the temperature returns to freezing. The last transaction from the IoT temperature sensor updates the temperature in the ledger. Therefore, the shipment appears to be in compliance.
  - Smart contract logic sets the shipment non-compliant when the temperature is too high. The ice cream shop can check if the shipment is out of compliance before accepting delivery.
    - You need to audit the blockchain history to determine compliance.
  - Once you investigate the blockchain history, you can mark the shipment as being out of compliance.
- 2. Why is blockchain immutable?
  - Blockchain uses hashes to tamper-proof the data in the blockchain.
  - Validation would detect the invalid blocks. Bad blocks would be thrown out during consensus. Therefore, blockchain cannot be changed in a healthy blockchain network.
  - Blockchain ledgers are read only for participants by default. Only

    processes with the granted permission can write data. Since ledgers are read only to participants, they are immutable.
    - Immutability depends on how you configure the blockchain network. It can be configured to be read only or immutable. However, blockchain is fully configurable. You can configure nodes to allow administrators

to make changes to transaction history. The changes are synchronized automatically.

- 3. How do smart contracts enable business workflows?
  - Smart contracts use pre-defined business workflow logic for common business scenarios.
  - Smart contracts are client applications you write that call the blockchain to execute transactions and change ledger state.
    - Smart contracts contain state and programmable logic. Transactions
  - O instantiate smart contracts and execute functions that change state.

    Therefore, smart contracts enable you to create a business workflow.

Check your answers