

2 The CIA triad and managing risk – Part 1

Name: _____ Class: _____ Date: _____

Vocabulary

Write each word three times.

English	Write it 3 times (English)		
CIA triad	_____	_____	_____
confidentiality	_____	_____	_____
integrity	_____	_____	_____
availability	_____	_____	_____
risk	_____	_____	_____
threat	_____	_____	_____
vulnerability	_____	_____	_____
asset	_____	_____	_____
defense in depth	_____	_____	_____

Recall

- You keep some things private, trust that a document is unchanged, and expect a service to work when needed.
- You lock your door (a physical control) and follow rules like “do not share your PIN.”
- You know some risks are worth avoiding and some you just accept.

New ideas

Read these first. Each idea has a short worked example. Then do the Practice below.

■ 1 The CIA triad

Security has three goals - the **CIA triad** : **confidentiality** (only the right people read it), **integrity** (it is unaltered), and **availability** (it works when needed).

Worked example. Encryption protects confidentiality; a file hash checks integrity; a backup protects availability.

■ 2 Risk and responses

A **risk** appears when a **threat** exploits a **vulnerability** to harm an **asset**. You can avoid, transfer, mitigate, or accept it.

Worked example. Buying insurance against a cyber loss is transferring the risk to the insurer.

■ 3 Types of control

Controls are grouped by **type** (physical, technical, managerial) and by **function** (preventative, detective, corrective). Layering many is **defense in depth**.

Worked example. A camera is physical by type and detective by function.

Watch out: Do not mix up the two groupings. Type = where it works; function = what it does. A camera can be classified both ways.

Practice

2.1 State the three goals of the CIA triad. [3]

2.2 Which CIA goal does encryption mainly protect? [1]

2.3 Define a risk in terms of a threat, a vulnerability, and an asset. [2]

2.4 Name the four ways to respond to a risk.

[2]

2.5 Classify a door lock and a CCTV camera by function.

[2]
