

# Answer Keys & Grading Notes

Objective-aligned exemplars, full-credit models, and the mistakes to watch for. **Do not distribute to students.**

**True-up step:** the objective sections below are built from the AP learning objectives. Paste your real Code.org prompts into chat and I'll fill exact question-by-question keys. The *AI-Proof Worked Answers* section matches the handwritten assignment exactly.

## A · Security concepts

Term	Answer
Encryption	Encoding data so only authorized parties can read it; needs a key to decrypt.
Symmetric key	Same key encrypts and decrypts.
Public key	A public key encrypts; a private key decrypts (asymmetric).
Phishing	Tricking a user into revealing credentials via fake messages.
Multifactor auth	Two+ independent proofs of identity (password + code).

**Common mistakes:** Confusing encryption with authentication; thinking public-key uses one key; calling malware and phishing the same thing.

## B · Impacts, bias & the digital divide

**Full-credit exemplar:** Full credit connects a specific innovation to BOTH a benefit and a harm, and names who is affected (e.g., biased training data disadvantaging a group, or unequal internet access widening opportunity gaps).

**Common mistakes:** Only listing benefits or only harms; 'bias' asserted without who is affected; digital divide described without a real consequence.