

# 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 · Loop tracing

Give credit for correct iteration count AND final value.

**Full-credit exemplar:** For a loop 'for i in 1..n', state the number of iterations and the accumulated result. Show the value each pass if the item asks.

**Common mistakes:** Off-by-one iteration counts; forgetting the loop variable updates; not tracking the accumulator.

## B · List traversals

Task	Correct algorithm shape
Sum	total starts 0; add each element during traversal.
Max	start with first element; compare each; keep the larger.
Count matching	counter starts 0; +1 when condition true.

**Common mistakes:** Initializing max to 0 (fails for all-negative lists); resetting the accumulator inside the loop; index out of range.

## AI-Proof Worked Answers — Lists & Loops — By Hand

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Grade the handwritten sheet against these. Item numbers match the assignment.

Item	Correct answer
1) total each pass	<code>i=1→1, i=2→3, i=3→6, i=4→10</code>
1) final total	10
2) find max	<pre>let max=nums[0]; for(let i=1;i&lt;nums.length;i++){ if(nums[i]&gt;max) max=nums[i]; }</pre>
4) bug fix	start <code>i=0</code> and use <code>i &lt; list.length</code> (was <code>i=1, i&lt;=length</code> → skips first & runs out of range)