

# Lists & Loops — By Hand

Name: \_\_\_\_\_ Period: \_\_\_\_\_ Date: \_\_\_\_\_

AP objective: AAP-2.K/2.O Points: 30

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**Why handwritten, in class:** this replaces a typed task AI can complete. Work every item by hand and **show all your steps** — no AI, phones, or notes. A correct answer with no work earns half credit; the work is what proves it's yours.

## Complete each item by hand — show all work

1. Trace this loop: show *i* and total after each pass, and the final total — 12 pts

GIVEN

```
let total = 0;
for (let i = 1; i <= 4; i++) {
  total = total + i;
}
```

2. Write a traversal that finds the largest value in the list *nums* — 10 pts

Start max at the first element, not 0.

3. Explain why your max starts at the first element, not 0 — 4 pts

4. This should print all 5 items of the list. Find and fix the off-by-one bug (circle it) — 4 pts

GIVEN

```
let list = [10, 20, 30, 40, 50];
for (let i = 1; i <= list.length; i++) {
  console.log(list[i]);
}
```

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## Oral defense (teacher — 60 sec)

Student answers one cold question aloud before grading. A student who did their own work can answer instantly; a copied one can't.  Strong  OK  Weak

## Scoring (30 pts)

Criterion	Pts	Earned
Trace w/ each pass	12	
Max traversal correct	10	
Reasoning	4	
Bug fixed	4	
<i>Gate</i> : passed oral defense (can explain the work aloud)	req'd	<input type="radio"/> Y <input type="radio"/> N
Total	30	

**Integrity gate:** if the student can't explain their work aloud, cap the score at 50% and require a resubmit.