

2D Array — Handwritten FRQ

Name: _____ Period: _____ Date: _____

AP objective: VAR-2.J/2.K Points: 30

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. For the given array, evaluate each access and state `m.length` and `m[0].length` — 8 pts

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```
int[][] m = { {1, 2, 3},  
              {4, 5, 6} };
```

- (a) `m.length`
- (b) `m[0].length`
- (c) `m[1][2]`
- (d) `m[0][1]`

2. Write `sumAll(int[][] m)` that returns the sum of every element (row-major) — 16 pts

This is AP FRQ #4. Outer loop rows, inner loop `m[r].length` columns.

3. Explain the difference between `m.length` and `m[r].length` — 6 pts

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
Accesses + dimensions correct	8	
Nested traversal correct	16	
length distinction explained	6	
<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.