

# A decision worth explaining

Class / pair code: \_\_\_\_\_ Date: \_\_\_\_\_

Choose one decision before closing a week. You are assessed on reasoning, not the amount of money you finish with.

Week, decision and two possible actions

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Before: what do the measurements, price, cash or deadline show?

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Prediction: what changes now and next week? Include a cost.

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After: actual result and one difference from the prediction

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What else might explain it? What evidence would you seek next?

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# Pattern → material → electrical result

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Fixed exercise, not a guaranteed game event. Electrical rejects increase. Photo overlay: 1.02×. Etch profile: 1.80×. Both reference bands: 0.90-1.10×. Values are normalized teaching indices.

1. Which clue deserves investigation first, and why?

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2. Sketch or explain a possible physical chain to electrical rejection.

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3. Compare extra inspection with a targeted trial. What does each change?

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4. Why is one out-of-range number not complete proof of root cause?

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# Yield and the money trail

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Use the fixed assumptions below. Show your calculation, not just the answer.

10,000 candidate die; die yield 80%; downstream acceptance 95%. A separate fixed cost pool of \$100,000 produces either 8,000 or 9,000 good units.

1. Functional die, accepted units and combined percentage

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2. Unit cost at each output level; what is held constant?

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Opening cash \$2.00M; wafer purchase \$.30M; variable processing \$.20M; sales receipts \$.80M; sold-stock cost \$.25M; fixed expense \$.10M. Ignore interest and tax.

3. Calculate closing cash and operating profit separately.

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4. Why are cash change and profit different?

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# Constraints & reflection

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| PPA         | Customer limit | A   | B   |
|-------------|----------------|-----|-----|
| Performance | $\geq 100$     | 110 | 95  |
| Power       | $\leq 5$       | 4.8 | 4.2 |
| Area        | $\leq 1.3$     | 1.2 | 1.1 |

1. Which flow is eligible? Explain every constraint.

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2. What cost or capacity information is still needed before committing?

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3. One thing my run supports; one thing it cannot prove

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4. Next time I would change \_\_\_ because the evidence shows \_\_\_.

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Self-check: evidence · mechanism · trade-off · uncertainty. Do not put a session save code or platform identity on a worksheet shared publicly.