

## Deduction Mysteries

### CASE 01

A prototype assembly was taken from the blueprint room of Helix Restoration between 01:45 and 03:30. The operation required specific qualifications and access. 7 suspects: Omari (apprentice), Akira (electrician), Frida (welder), Tariq (shop manager), Hiroshi (painter), Hadley (customer service rep), Mauro (machinist).

#### Q Who took the prototype assembly?

1. Akira's shop camera shows continuous presence in a separate building.
2. Hiroshi lacks the required professional expertise – confirmed by personnel records.
3. The theft required a specific paint formulation only stocked in the restoration lab.
4. Omari's shop key was revoked two weeks prior; archived access list confirms.
5. Frida was seen near the manager's office earlier that evening, but they had left the building by 21:50 and never returned.
6. Tariq has all three required qualifications.
7. Frida was at a documented conference during the window – verified by door sensor.
8. Hadley had the qualifications but family was visiting during the window – third-party verified.
9. Three independent requirements: professional expertise, shop key access, and presence at the blueprint room during the 01:45-03:30 window.
- 10 A trace at the scene – a specific paint formulation only stocked in the restoration lab – . matches inventory accessible only to Tariq.
- 11 Mauro's time-clock log shows continuous presence in a separate building.
- 12 Tariq stated they left the building at 22:20, but the DHCP server log shows their manager key . active at 01:45.

### CASE 02

A prototype assembly was taken from the welding bay of Saint-Clair Machining between 00:45 and 02:15. The operation required specific qualifications and access. 6 suspects: Dario (parts clerk), Selene (customer service rep), Finnegan (welder), Sami (electrician), Jules (apprentice), Octavia (quality inspector).

#### Q Who took the prototype assembly?

1. Sami was seen near the customer pickup bay earlier that evening, but they had left the building by 21:50 and never returned.
2. Jules's door sensor shows continuous presence in a separate building.
3. Three independent requirements: professional expertise, parts-room code access, and presence at the welding bay during the 00:45-02:15 window.
4. Sami had the qualifications but was hospitalized during the window – third-party verified.
5. A trace at the scene – a digital certificate issued only to senior staff – matches inventory accessible only to Finnegan.
6. Dario had the qualifications but was hospitalized during the window – third-party verified.
7. Finnegan has all three required qualifications.
8. The theft required a digital certificate issued only to senior staff.
9. Octavia was at a documented conference during the window – verified by time-clock log.
- 10 Selene's parts-room code was revoked two weeks prior; archived access list confirms.
- 11 Finnegan stated they left the building at 22:55, but the elevator log shows their shop key . active at 00:45.

## Deduction Mysteries

### CASE 03

A special collection key was taken from the restoration room of Aldermarsh Library between 02:30 and 04:00. The operation required specific qualifications and access. 6 suspects: Kenji (volunteer), Tatum (custodian), Fariha (archivist), Daphne (rare-books curator), Mateo (visiting scholar), Dimitri (head librarian).

#### Q Who took the special collection key?

1. Fariha's staff key was revoked two weeks prior; archived access list confirms.
2. Dimitri's staff key was revoked two weeks prior; archived access list confirms.
3. Three independent requirements: professional expertise, staff key access, and presence at the restoration room during the 02:30-04:00 window.
4. Tatum lacks the required professional expertise – confirmed by personnel records.
5. A trace at the scene – a digital certificate issued only to senior staff – matches inventory accessible only to Kenji.
6. Mateo's staff key was revoked two weeks prior; archived access list confirms.
7. Mateo was seen near the reference desk earlier that evening, but they had left the building by 20:40 and never returned.
8. Kenji stated they left the building at 23:20, but the network authentication record shows their reading-room pass active at 02:30.
9. Kenji has all three required qualifications.
- 10 The theft required a digital certificate issued only to senior staff.

11 Daphne lacks	the required professional expertise – confirmed by	personnel records.			
A) Kenji	B) Mateo	C) Dimitri	D) Daphne	E) Fariha	F) Tatum

### CASE 04

A head chef's knife set was taken from the outdoor patio of Pemberton Tavern between 03:45 and 05:30. The operation required specific qualifications and access. 7 suspects: Idris (line cook), Klaus (dishwasher), Omari (sommelier), Cassia (server), Thora (bartender), Fenella (pastry chef), Anastasia (sous chef).

#### Q Who took the head chef's knife set?

1. Omari's POS log shows continuous presence in a separate building.
2. Fenella was at a documented training during the window – verified by witness server.
3. The theft required a unique encryption signature traceable to internal-only training.
4. Idris had the qualifications but was hospitalized during the window – third-party verified.
5. Cassia was seen near the wine cellar earlier that evening, but they had left the building by 20:05 and never returned.
6. Klaus had the qualifications but was hospitalized during the window – third-party verified.
7. Thora was at a documented training during the window – verified by reservation system.
8. Anastasia has all three required qualifications.
9. Three independent requirements: professional training, manager key access, and presence at the outdoor patio during the 03:45-05:30 window.
- 10 Cassia's witness server shows continuous presence in a separate building.
- 11 Anastasia stated they left the building at 23:55, but the DHCP server log shows their manager . key active at 03:45.
- 12 A trace at the scene – a unique encryption signature traceable to internal-only training – . matches inventory accessible only to Anastasia.

## Deduction Mysteries

### CASE 05

A research notebook was swapped from the cleanroom of Pemberton Pharmaceuticals between 01:15 and 03:30. The operation required specific qualifications and access. 7 suspects: Galina (postdoctoral researcher), Arjun (graduate student), Iolanthe (visiting scientist), Faye (safety officer), Sigrid (principal investigator), Selene (lab technician), Mei (undergraduate volunteer).

#### Q Who swapped the research notebook?

1. Arjun's freezer key was revoked two weeks prior; archived access list confirms.
2. The sample tampering required a unique encryption signature traceable to internal-only training.
3. A trace at the scene – a unique encryption signature traceable to internal-only training – matches inventory accessible only to Iolanthe.
4. Mei had the qualifications but was on a flight during the window – third-party verified.
5. Sigrid's badge swipe shows continuous presence in a separate building.
6. Iolanthe has all three required qualifications.
7. Galina had the qualifications but family was visiting during the window – third-party verified.
8. Selene's freezer key was revoked two weeks prior; archived access list confirms.
9. Mei was seen near the PI office earlier that evening, but they had left the building by 20:15 and never returned.
- 10 Faye's clean-room entry log shows continuous presence in a separate building.
- 11 Iolanthe stated they left the building at 23:15, but the network authentication record shows . their biohazard clearance active at 01:15.

### CASE 06

A register cash was taken from the pastry station of Octavia's between 02:30 and 04:45. The operation required specific qualifications and access. 6 suspects: Cosima (sommelier), Octavia (host), Vera (dishwasher), Isolde (manager), Florian (bartender), Sigrid (sous chef).

#### Q Who took the register cash?

1. Florian had the qualifications but family was visiting during the window – third-party verified.
2. The theft required a custom-machined tool stocked only in equipment closet B.
3. Cosima had the qualifications but was on a flight during the window – third-party verified.
4. Octavia stated they left the building at 22:25, but the DHCP server log shows their master key active at 02:30.
5. Isolde was at a documented conference during the window – verified by kitchen camera.
6. Vera was seen near the outdoor patio earlier that evening, but they had left the building by 21:20 and never returned.
7. Octavia has all three required qualifications.
8. Vera's register code was revoked two weeks prior; archived access list confirms.
9. Sigrid's time-clock record shows continuous presence in a separate building.
- 10 Three independent requirements: professional certification, register code access, and presence . at the pastry station during the 02:30-04:45 window.
- 11 A trace at the scene – a custom-machined tool stocked only in equipment closet B – matches . inventory accessible only to Octavia.

## Answer Key – Deduction Mysteries

Solve before peeking. Correct suspect and key reasoning steps below.

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### Case 01 A) Tariq

- ☒ Three requirements (professional expertise, shop key, presence at the blueprint room during the 01:45-03:30 window) plus a technical trace narrow this case.
  - ☒ Omari eliminated by alibi or missing qualification.
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### Case 02 F) Finnegan

- ☒ Three requirements (professional expertise, parts-room code, presence at the welding bay during the 00:45-02:15 window) plus a technical trace narrow this case.
  - ☒ Dario eliminated by alibi or missing qualification.
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### Case 03 A) Kenji

- ☒ Three requirements (professional expertise, staff key, presence at the restoration room during the 02:30-04:00 window) plus a technical trace narrow this case.
  - ☒ Tatum eliminated by alibi or missing qualification.
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### Case 04 D) Anastasia

- ☒ Three requirements (professional training, manager key, presence at the outdoor patio during the 03:45-05:30 window) plus a technical trace narrow this case.
  - ☒ Idris eliminated by alibi or missing qualification.
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### Case 05 E) Iolanthe

- ☒ Three requirements (professional certification, freezer key, presence at the cleanroom during the 01:15-03:30 window) plus a technical trace narrow this case.
  - ☒ Galina eliminated by alibi or missing qualification.
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### Case 06 E) Octavia

- ☒ Three requirements (professional certification, register code, presence at the pastry station during the 02:30-04:45 window) plus a technical trace narrow this case.
- ☒ Cosima eliminated by alibi or missing qualification.