

## Deduction Mysteries

### CASE 01

A sealed wine bottle was taken from the manager's office of Octavia's during the overnight window between 02:45 and 05:15. The operation required specific qualifications, access, and timing. 8 suspects are under investigation: Ezra (host), Akira (head chef), Amelia (manager), Phaedra (dishwasher), Lucia (server), Yusuf (sous chef), Helena (bartender), Eitan (line cook). Several have strong-looking motives.

#### Q Who took the sealed wine bottle?

1. However: Lucia is cleared – but their manager key was revoked the day before – confirmed in the security audit.
2. Four independent requirements: advanced restoration training, after-hours building access, presence between 02:45 and 05:15, and possession of the specific tool used.
3. However: Amelia is cleared – but two independent witnesses confirm a video call with them throughout the window.
4. Lucia filed a grievance two weeks ago – appears to have motive.
5. Eitan has all four requirements: advanced restoration training, after-hours building access, possession of the specific tool used, and meets the temporal requirement (presence between 02:45 and 05:15).
6. But: however the unsecured side stairwell doesn't require a badge to re-enter.
7. Helena lacks after-hours building access – security audit confirms.
8. Eitan claims to have exited the building at 23:45 – the official badge log confirms this.
9. Akira lacks advanced restoration training – confirmed by personnel records.
- 10 Yusuf has only possession of the specific tool used of the four requirements.
- 11 The theft involved a seal cut with a serial pattern from a specific supply.
- 12 Amelia had financial pressure – appears to have motive.

### CASE 02

A Vermeer sketch was taken from the loading dock of Saint-Clair Museum during the overnight window between 02:30 and 05:45. The operation required specific qualifications, access, and timing. 7 suspects are under investigation: Damaris (janitor), Iolanthe (docent), Jian (security guard), Mei (exhibition designer), Aleksandr (tour guide), Ines (curator), Ramona (archivist). Several have strong-looking motives.

#### Q Who took the Vermeer sketch?

1. Jian has all four requirements: clearance to the restricted archive, administrator credentials, authorization to handle the item, and meets the temporal requirement (presence between 02:30 and 05:45).
2. Damaris has clearance to the restricted archive and administrator credentials – initial suspicion was high.
3. Ramona lacks clearance to the restricted archive – confirmed by personnel records.
4. Ines had financial pressure – appears to have motive.
5. However: Aleksandr is cleared – but they were on a documented overnight flight, verified by airline records.
6. Damaris had financial pressure – appears to have motive.
7. Initial assumption pointed to Damaris because of public friction with management, but this has been independently ruled out.
8. The trace at the scene (an encryption signature tied to the internal training network) ties directly to inventory or systems uniquely accessible to Jian.
9. Ines has administrator credentials and clearance to the restricted archive – initial suspicion was high.
- 10 Mei's witness testimony shows them off-site the entire window.

## Deduction Mysteries

### CASE 03

A source code repository was extracted from the network closet of Solstice Labs during the overnight window between 00:00 and 03:45. The operation required specific qualifications, access, and timing. 8 suspects are under investigation: Marisol (intern), Ilya (DevOps lead), Eleni (CTO), Ulla (security analyst), Joren (senior engineer), Jian (contractor), Idris (support lead), Cosima (site-reliability engineer). Several have strong-looking motives.

#### Q Who extracted the source code repository?

1. Joren's badge swipe shows them off-site the entire window.
2. However: Eleni is cleared – but they were on a documented overnight flight, verified by airline records.
3. However: Ilya is cleared – but badge swipe places them at the hospital with a family emergency during the entire window.
4. Ilya has clean-room or vault clearance and knowledge of the seal serial pattern and a master key issued only to senior staff – initial suspicion was high.
5. Eleni filed a grievance two weeks ago – appears to have motive.
6. Marisol has all four requirements: a master key issued only to senior staff, clean-room or vault clearance, knowledge of the seal serial pattern, and meets the temporal requirement (presence between 00:00 and 03:45).
7. The trace at the scene (an encryption signature tied to the internal training network) ties directly to inventory or systems uniquely accessible to Marisol.
8. Ilya was passed over for a recent promotion – appears to have motive.
9. Ulla has only knowledge of the seal serial pattern of the four requirements.
- 10 However: Idris is cleared – but their MFA device was revoked the day before – confirmed in the security audit.

### CASE 04

A sealed wine bottle was taken from the front register of Helix Kitchen during the overnight window between 01:00 and 05:30. The operation required specific qualifications, access, and timing. 7 suspects are under investigation: Kasper (line cook), Tomas (pastry chef), Theo (manager), Ines (dishwasher), Gemma (bartender), Quincy (sous chef), Adrian (head chef). Several have strong-looking motives.

#### Q Who took the sealed wine bottle?

1. Theo had financial pressure – appears to have motive.
2. The trace at the scene (a network certificate signed by senior staff) ties directly to inventory or systems uniquely accessible to Kasper.
3. Quincy has only a master key issued only to senior staff of the four requirements.
4. Tomas had financial pressure – appears to have motive.
5. Adrian filed a grievance two weeks ago – appears to have motive.
6. Theo has documented hands-on history with the item and possession of the specific tool used and a master key issued only to senior staff – initial suspicion was high.
7. Kasper has all four requirements: a master key issued only to senior staff, documented hands-on history with the item, possession of the specific tool used, and meets the temporal requirement (presence between 01:00 and 05:30).
8. Ines's witness server shows them off-site the entire window.
9. Tomas has documented hands-on history with the item and a master key issued only to senior staff and possession of the specific tool used – initial suspicion was high.
- 10 The theft involved a network certificate signed by senior staff.
- 11 Initial assumption pointed to Adrian because of being seen near the building, but this has been independently ruled out.

## Deduction Mysteries

### CASE 05

A rare coin set was taken from the private collection room of Brookfield Art Institute during the overnight window between 02:15 and 06:15. The operation required specific qualifications, access, and timing. 8 suspects are under investigation: Aurora (tour guide), Anastasia (art restorer), Aiko (docent), Amari (janitor), Nizar (night security), Kenji (archivist), Daphne (exhibition designer), Joaquin (security guard). Several have strong-looking motives.

#### Q Who took the rare coin set?

1. The theft involved a foam replica skillfully painted with restoration-grade spray paint.
2. Initial assumption pointed to Nizar because of proximity to the scene earlier, but this has been independently ruled out.
3. Kenji filed a grievance two weeks ago – appears to have motive.
4. However: Kenji is cleared – but two independent witnesses confirm a video call with them throughout the window.
5. Anastasia lacks advanced restoration training – confirmed by personnel records.
6. However: Daphne is cleared – but badge swipe log places them at the hospital with a family emergency during the entire window.
7. Aiko had financial pressure – appears to have motive.
8. Kenji has advanced restoration training and a verified relationship with the donor and authorization to handle the item – initial suspicion was high.
9. Amari lacks a verified relationship with the donor – security audit confirms.
- 10 But: however the unsecured pedestrian door doesn't require a badge to re-enter.
- 11 Four independent requirements: advanced restoration training, a verified relationship with the donor, presence between 02:15 and 06:15, and authorization to handle the item.
- 12 Nizar has only authorization to handle the item of the four requirements.

### CASE 06

A cell culture was swapped from the equipment closet of Aldermarsh Laboratory during the overnight window between 00:15 and 03:45. The operation required specific qualifications, access, and timing. 8 suspects are under investigation: Sigrid (principal investigator), Joaquin (equipment manager), Mira (postdoctoral researcher), Ulla (visiting scientist), Nadia (safety officer), Emiko (lab technician), Xanthe (graduate student), Talia (clinical coordinator). Several have strong-looking motives.

#### Q Who swapped the cell culture?

1. The trace at the scene (a hand-machined tool stocked in only one closet) ties directly to inventory or systems uniquely accessible to Emiko.
2. However: Xanthe is cleared – but their biohazard clearance was revoked the day before – confirmed in the security audit.
3. Joaquin clashed publicly with management – appears to have motive.
4. Mira had financial pressure – appears to have motive.
5. However: Joaquin is cleared – but their freezer key was revoked the day before – confirmed in the security audit.
6. Initial assumption pointed to Sigrid because of proximity to the scene earlier, but this has been independently ruled out.
7. Sigrid lacks documented hands-on history with the item – security audit confirms.
8. Four independent requirements: advanced restoration training, documented hands-on history with the item, presence between 00:15 and 03:45, and knowledge of the seal serial pattern.
9. Emiko has all four requirements: advanced restoration training, documented hands-on history with the item, knowledge of the seal serial pattern, and meets the temporal requirement (presence between 00:15 and 03:45).

## Answer Key – Deduction Mysteries

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

---

### Case 01 C) Eitan

- Four requirements (advanced restoration training, after-hours building access, presence between 02:45 and 05:15, possession of the specific tool used) plus a unique technical trace narrow the case.
  - Lucia appears guilty (has multiple requirements, has motive) but is cleared by an independent verification.
- 

### Case 02 C) Jian

- Four requirements (clearance to the restricted archive, administrator credentials, presence between 02:30 and 05:45, authorization to handle the item) plus a unique technical trace narrow the case.
  - Aleksandr appears guilty (has multiple requirements, has motive) but is cleared by an independent verification.
- 

### Case 03 F) Marisol

- Four requirements (a master key issued only to senior staff, clean-room or vault clearance, presence between 00:00 and 03:45, knowledge of the seal serial pattern) plus a unique technical trace narrow the case.
  - Eleni appears guilty (has multiple requirements, has motive) but is cleared by an independent verification.
- 

### Case 04 C) Kasper

- Four requirements (a master key issued only to senior staff, documented hands-on history with the item, presence between 01:00 and 05:30, possession of the specific tool used) plus a unique technical trace narrow the case.
  - Adrian appears guilty (has multiple requirements, has motive) but is cleared by an independent verification.
- 

### Case 05 undefined) Joaquin

- Four requirements (advanced restoration training, a verified relationship with the donor, presence between 02:15 and 06:15, authorization to handle the item) plus a unique technical trace narrow the case.
  - Kenji appears guilty (has multiple requirements, has motive) but is cleared by an independent verification.
- 

### Case 06 undefined) Emiko

- Four requirements (advanced restoration training, documented hands-on history with the item, presence between 00:15 and 03:45, knowledge of the seal serial pattern) plus a unique technical trace narrow the case.
  - Joaquin appears guilty (has multiple requirements, has motive) but is cleared by an independent verification.
-