

## Deduction Mysteries

### CASE 01

An internal API key was extracted from the server farm of Northgate Systems between 01:30 and 03:00. The operation required specific qualifications and access. 7 suspects: Zephyr (site-reliability engineer), Lana (contractor), Thora (product manager), Penelope (DevOps lead), Tarek (intern), Elspeth (security analyst), Theo (data scientist).

#### Q Who extracted the internal API key?

1. Lana stated they left the building at 23:35, but the parking-lot camera shows their MFA device active at 01:30.
2. Tarek's witness colleague shows continuous presence in a separate building.
3. Thora was at a documented hospital appointment during the window – verified by CCTV camera.
4. Three independent requirements: professional training, VPN credentials access, and presence at the server farm during the 01:30-03:00 window.
5. Zephyr was at a documented training during the window – verified by MFA token log.
6. Penelope was at a documented conference during the window – verified by VPN session log.
7. The data theft required a custom-machined tool stocked only in equipment closet B.
8. Theo was at a documented conference during the window – verified by badge swipe.
9. Elspeth lacks the required professional training – confirmed by personnel records.
- 10 A trace at the scene – a custom-machined tool stocked only in equipment closet B – matches . inventory accessible only to Lana.
- 11 Theo was seen near the data archive earlier that evening, but they had left the building by . 20:50 and never returned.
- 12 Lana has all three required qualifications.

### CASE 02

A bronze sculpture was taken from the storage basement of Helix Modern Art between 03:45 and 05:15. The operation required specific qualifications and access. 7 suspects: Nikolai (gift shop manager), Talia (exhibition designer), Joaquin (art restorer), Caelan (security guard), Daphne (janitor), Elara (tour guide), Faye (curator).

#### Q Who took the bronze sculpture?

1. Daphne lacks the required professional certification – confirmed by personnel records.
2. Three independent requirements: professional certification, vault combination access, and presence at the storage basement during the 03:45-05:15 window.
3. The theft required a unique encryption signature traceable to internal-only training.
4. Talia was seen near the climate-controlled vault earlier that evening, but they had left the building by 20:45 and never returned.
5. Faye was at a documented training during the window – verified by security camera.
6. Nikolai has all three required qualifications.
7. Joaquin was at a documented training during the window – verified by door sensor.
8. Nikolai stated they left the building at 23:25, but the network authentication record shows their vault combination active at 03:45.
9. Elara's motion sensor shows continuous presence in a separate building.
- 10 Talia's witness testimony shows continuous presence in a separate building.
- 11 A trace at the scene – a unique encryption signature traceable to internal-only training – . matches inventory accessible only to Nikolai.
- 12 Caelan was at a documented conference during the window – verified by witness testimony.

## Deduction Mysteries

### CASE 03

A prototype assembly was taken from the blueprint room of Saint-Clair Machining between 01:00 and 03:00. The operation required specific qualifications and access. 7 suspects: Juno (apprentice), Aaliyah (quality inspector), Katarina (parts clerk), Florian (master mechanic), Phaedra (electrician), Hakim (painter), Fenella (machinist).

#### Q Who took the prototype assembly?

1. Juno lacks the required professional training – confirmed by personnel records.
2. Fenella stated they left the building at 23:05, but the parking-lot camera shows their parts-room code active at 01:00.
3. Juno was seen near the employee locker area earlier that evening, but they had left the building by 21:00 and never returned.
4. Hakim lacks the required professional training – confirmed by personnel records.
5. Florian lacks the required professional training – confirmed by personnel records.
6. A trace at the scene – a unique encryption signature traceable to internal-only training – matches inventory accessible only to Fenella.
7. The theft required a unique encryption signature traceable to internal-only training.
8. Fenella has all three required qualifications.
9. Phaedra was at a documented hospital appointment during the window – verified by time-clock log.
- 10 Three independent requirements: professional training, shop key access, and presence at the blueprint room during the 01:00-03:00 window.
- 11 Katarina's door sensor shows continuous presence in a separate building.

### CASE 04

A cell culture was swapped from the cleanroom of Nordic Bio between 02:45 and 04:00. The operation required specific qualifications and access. 6 suspects: Omari (safety officer), Yara (undergraduate volunteer), Tatum (lab technician), Mauro (equipment manager), Mikael (postdoctoral researcher), Hiroshi (principal investigator).

#### Q Who swapped the cell culture?

1. Mauro was at a documented training during the window – verified by equipment timestamp.
2. Tatum stated they left the building at 23:55, but the elevator log shows their lab badge active at 02:45.
3. Mikael lacks the required professional training – confirmed by personnel records.
4. Tatum has all three required qualifications.
5. A trace at the scene – a unique encryption signature traceable to internal-only training – matches inventory accessible only to Tatum.
6. Three independent requirements: professional training, biohazard clearance access, and presence at the cleanroom during the 02:45-04:00 window.
7. Yara lacks the required professional training – confirmed by personnel records.
8. The sample tampering required a unique encryption signature traceable to internal-only training.
9. Omari's biohazard clearance was revoked two weeks prior; archived access list confirms.
- 10 Yara was seen near the glove box earlier that evening, but they had left the building by 21:40 and never returned.
- 11 Hiroshi's biohazard clearance was revoked two weeks prior; archived access list confirms.

## Deduction Mysteries

### CASE 05

A calibration kit was swapped from the sequencing room of Nordic Bio between 00:30 and 02:15. The operation required specific qualifications and access. 7 suspects: Hattie (graduate student), Isolde (safety officer), Quincy (clinical coordinator), Florian (principal investigator), Renata (postdoctoral researcher), Stellan (equipment manager), Ramona (visiting scientist).

#### Q Who swapped the calibration kit?

1. Quincy was at a documented training during the window – verified by witness sighting.
2. A trace at the scene – a unique encryption signature traceable to internal-only training – matches inventory accessible only to Hattie.
3. Isolde's freezer access log shows continuous presence in a separate building.
4. Ramona was at a documented training during the window – verified by sample log.
5. Stellan's freezer access log shows continuous presence in a separate building.
6. Renata was at a documented training during the window – verified by equipment timestamp.
7. Three independent requirements: professional training, clean-room access access, and presence at the sequencing room during the 00:30-02:15 window.
8. Florian's badge swipe shows continuous presence in a separate building.
9. Hattie stated they left the building at 23:25, but the elevator log shows their biohazard clearance active at 00:30.
- 10 The sample tampering required a unique encryption signature traceable to internal-only training.
- 11 Hattie has all three required qualifications.

### CASE 06

A signed agreement was taken from the data center of Velocity Labs between 03:15 and 05:15. The operation required specific qualifications and access. 7 suspects: Hattie (senior engineer), Kerensa (CFO), Daphne (HR director), Mateo (intern), Noor (executive assistant), Mira (IT administrator), Emiko (security officer).

#### Q Who took the signed agreement?

1. Daphne was seen near the secure terminal earlier that evening, but they had left the building by 21:45 and never returned.
2. Kerensa had the qualifications but was hospitalized during the window – third-party verified.
3. Three independent requirements: professional certification, VPN access access, and presence at the data center during the 03:15-05:15 window.
4. Emiko lacks the required professional certification – confirmed by personnel records.
5. Daphne was at a documented training during the window – verified by VPN session log.
6. The corporate theft required a unique encryption signature traceable to internal-only training.
7. A trace at the scene – a unique encryption signature traceable to internal-only training – matches inventory accessible only to Noor.
8. Mira had the qualifications but was on a flight during the window – third-party verified.
9. Noor has all three required qualifications.
- 10 Mateo had the qualifications but was hospitalized during the window – third-party verified.
- 11 Noor stated they left the building at 23:00, but the parking-lot camera shows their elevator key active at 03:15.
- 12 Hattie was at a documented conference during the window – verified by VPN session log.

## Answer Key – Deduction Mysteries

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

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### Case 01 `undefined`) Lana

- ☒ Three requirements (professional training, VPN credentials, presence at the server farm during the 01:30-03:00 window) plus a technical trace narrow this case.
  - ☒ Zephyr eliminated by alibi or missing qualification.
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### Case 02 C) Nikolai

- ☒ Three requirements (professional certification, vault combination, presence at the storage basement during the 03:45-05:15 window) plus a technical trace narrow this case.
  - ☒ Talia eliminated by alibi or missing qualification.
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### Case 03 F) Fenella

- ☒ Three requirements (professional training, shop key, presence at the blueprint room during the 01:00-03:00 window) plus a technical trace narrow this case.
  - ☒ Juno eliminated by alibi or missing qualification.
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### Case 04 F) Tatum

- ☒ Three requirements (professional training, biohazard clearance, presence at the cleanroom during the 02:45-04:00 window) plus a technical trace narrow this case.
  - ☒ Omari eliminated by alibi or missing qualification.
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### Case 05 F) Hattie

- ☒ Three requirements (professional training, clean-room access, presence at the sequencing room during the 00:30-02:15 window) plus a technical trace narrow this case.
  - ☒ Isolde eliminated by alibi or missing qualification.
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### Case 06 `undefined`) Noor

- ☒ Three requirements (professional certification, VPN access, presence at the data center during the 03:15-05:15 window) plus a technical trace narrow this case.
- ☒ Hattie eliminated by alibi or missing qualification.