



The Bio-Lab Blackout

Grade 6 math · Multiplication, Multi-step word problems, Word problems, Fractions of a number, Division · Reading level grades 7-9

Detective: _____ Date: _____

An emergency alarm echoes through the sterile corridors of the research wing. Someone has breached the high-security cryo-vault and stolen the revolutionary nanotech suture prototype. The Trauma Team is on high alert, and the Chief Resident needs your sharp analytical mind to trace the clues left behind in the operating theaters.

1. Solve each math problem. The answer is a number, and the letter beside it is what that number stands for.
2. In the clue boxes, write that letter in every box showing the same number, then read the secret clue.
3. Use each clue to cross suspects off the list. The one suspect left at the end is the culprit!

My answer: the rogue surgeon is _____

Possible suspects

Cross off a row as each clue rules it out. The one left at the end is the culprit.

NAME	LAB SPECIALTY	HEIST TOOL	SUTURE KNOT STYLE	HAIR SAMPLE	ALLERGEN SENSITIVITY
Dr Gertrude Elion	micro stitching	bypass chip	right handed knot	shaved head	latex gloves
Dr Alexis Carrel	neural mapping	bypass chip	right handed knot	dark curls	iodine scent
Dr Virginia Apgar	neural mapping	bypass chip	left handed knot	shaved head	latex gloves
Dr Hideyo Noguchi	bio electronics	plasma torch	right handed knot	shaved head	latex gloves
Dr Michael DeBakey	neural mapping	emp scalpel	right handed knot	shaved head	bright surgical lights
Dr William Harvey	micro stitching	sonic drill	right handed knot	silver streak	bright surgical lights
Dr Sigmund Freud	bio electronics	emp scalpel	left handed knot	silver streak	bright surgical lights
Dr Harvey Cushing	bio electronics	bypass chip	left handed knot	dark curls	latex gloves
Dr Andreas Vesalius	micro stitching	plasma torch	right handed knot	silver streak	bright surgical lights
Dr Florence Nightingale	bio electronics	plasma torch	left handed knot	shaved head	latex gloves
Dr Jonas Salk	micro stitching	bypass chip	right handed knot	shaved head	iodine scent
Dr Walter Reed	laser surgery	freeze gel	right handed knot	shaved head	latex gloves
Dr Gerty Cori	neural mapping	plasma torch	right handed knot	shaved head	latex gloves
Dr Carlos Finlay	bio electronics	emp scalpel	left handed knot	dark curls	iodine scent
Dr Elizabeth Blackwell	micro stitching	bypass chip	left handed knot	dark curls	latex gloves
Dr Christiaan Barnard	neural mapping	sonic drill	left handed knot	silver streak	latex gloves
Dr Alexander Fleming	bio electronics	emp scalpel	right handed knot	dark curls	latex gloves
Dr Rosalind Franklin	neural mapping	sonic drill	right handed knot	shaved head	latex gloves
Dr Edward Jenner	bio electronics	emp scalpel	right handed knot	dark curls	bright surgical lights
Dr Marie Curie	laser surgery	freeze gel	right handed knot	shaved head	bright surgical lights
Dr Charles Drew	gene therapy	sonic drill	right handed knot	dark curls	latex gloves

Multiplication facts (1-12)

To inspect the broken locks, we must count the storage trays. Each shelf in the bio-vault holds multiple rows of petri dishes. Let's multiply the rows to find the total number of tampered dishes.

Solve each problem, then write its letter in every clue box that shows the same number.

[illegible]

$$12 \times 11 = \boxed{} \rightarrow \boxed{\text{T}}$$

$$11 \times 1 = \boxed{} \rightarrow \boxed{\text{S}}$$

$$12 \times 10 = \boxed{} \rightarrow \boxed{\mathbf{Y}}$$

$3 \times 11 = \boxed{} \rightarrow \boxed{\text{C}}$

$10 \times 5 = \boxed{} \rightarrow \boxed{\text{N}}$

$7 \times 5 = \boxed{} \rightarrow \boxed{\text{P}}$

$7 \times 7 = \square \rightarrow \mathbf{U}$

$2 \times 12 = \boxed{} \rightarrow \boxed{\mathbf{D}}$

$5 \times 6 = \boxed{} \rightarrow \boxed{\mathbf{B}}$

$$2 \times 5 = \boxed{} \rightarrow \boxed{\mathbf{E}}$$

$$9 \times 9 = \boxed{} \rightarrow \boxed{0}$$

$11 \times 8 = \boxed{} \rightarrow \boxed{1}$

$8 \times 8 = \boxed{} \rightarrow \boxed{\text{H}}$

$7 \times 3 = \boxed{} \rightarrow \boxed{\text{A}}$

Scratch space:

CLUE 5**Division facts (1-12) - the last clue**

To preserve the remaining culture samples, we must divide them equally among our sterile backup containers.
Let's see how many samples fit into each test tube rack.

First solve each problem. Then find each answer in the numbered list below and cross that sentence out. One sentence will be left - that is exactly what the villain did!

Step 1 - solve these:

$36 \div 9 = \boxed{}$

$30 \div 10 = \boxed{}$

$54 \div 9 = \boxed{}$

$120 \div 10 = \boxed{}$

$90 \div 10 = \boxed{}$

$25 \div 5 = \boxed{}$

$90 \div 9 = \boxed{}$

$77 \div 11 = \boxed{}$

$80 \div 10 = \boxed{}$

$20 \div 10 = \boxed{}$

$8 \div 8 = \boxed{}$

Step 2 - cross out the sentence with each answer:

1. The villain disrupted the cryo chamber, then escaped with the micro chip.
2. The villain sliced the secure bio vault, then stole the experimental serum.
3. The villain bypassed the neural lock, then grabbed the nanotech thread.
4. The villain hacked the incubator, then swiped the synthetic organ.
5. The villain disrupted the cryo chamber, then stole the experimental serum.
6. The villain hacked the incubator, then stole the experimental serum.
7. The villain bypassed the neural lock, then swiped the synthetic organ.
8. The villain sliced the secure bio vault, then grabbed the nanotech thread.
9. The villain hacked the incubator, then grabbed the nanotech thread.
10. The villain bypassed the neural lock, then pocketed the laser scalpel.
11. The villain sliced the secure bio vault, then swiped the synthetic organ.
12. The villain bypassed the neural lock, then escaped with the micro chip.

Answer Key

The Bio-Lab Blackout

Culprit: Dr Hideyo Noguchi

bio electronics · plasma torch · right handed knot · shaved head · latex gloves

Trail: Start 21 → Clue 1 15 → Clue 2 11 → Clue 3 6 → Clue 4 4 → Clue 5 1

Clue 1 (Multiplication facts (1-12)): "THE SUSPECT DID NOT USE THE BYPASS CHIP"

$12 \times 11 = 132$ (T) · $11 \times 1 = 11$ (S) · $12 \times 10 = 120$ (Y) · $3 \times 11 = 33$ (C) · $10 \times 5 = 50$ (N) · $7 \times 5 = 35$ (P) · $7 \times 7 = 49$ (U) · $2 \times 12 = 24$ (D) · $5 \times 6 = 30$ (B) · $2 \times 5 = 10$ (E) · $9 \times 9 = 81$ (O) · $11 \times 8 = 88$ (I) · $8 \times 8 = 64$ (H) · $7 \times 3 = 21$ (A)

Clue 2 (Multi-step word problems): "RIGHT HANDED KNOT"

There were 195 forceps in all. 2 Trauma Team used 21 forceps each. The other 3 Trauma Team shared the rest equally. How many forceps did each of the other Trauma Team get? = 51 (R) · There were 87 scalpels in all. 1 Trauma Team used 12 scalpels each. The other 5 Trauma Team shared the rest equally. How many scalpels did each of the other Trauma Team get? = 15 (A) · Chief Resident collected 152 vials in the morning and 148 vials in the afternoon, then split them equally among 5 Trauma Team. How many vials did each get? = 60 (H) · Chief Resident earned 8 forceps in each of 5 rounds, plus 40 bonus forceps. Then 15 forceps were lost. How many forceps are left? = 65 (I) · There were 50 syringes in all. 4 Trauma Team used 8 syringes each. The other 2 Trauma Team shared the rest equally. How many syringes did each of the other Trauma Team get? = 9 (G) · There were 480 syringes in all. 4 Trauma Team used 39 syringes each. The other 4 Trauma Team shared the rest equally. How many syringes did each of the other Trauma Team get? = 81 (T) · Chief Resident earned 2 forceps in each of 6 rounds, plus 33 bonus forceps. Then 9 forceps were lost. How many forceps are left? = 36 (N)

Clue 3 (Word problems): "LATEX GLOVES"

There were 89 sutures. 22 were used up. How many sutures are left? = 67 (L) · There were 88 forceps. 15 were used up. How many forceps are left? = 73 (A) · There were 63 vials. 4 were used up. How many vials are left? = 59 (G) · Chief Resident found 3 syringes yesterday and 28 more today. How many syringes in all? = 31 (E) · Chief Resident lined up 10 rows of 12 syringes. How many syringes in all? = 120 (X) · There were 30 vials. 7 were used up. How many vials are left? = 23 (T) · Chief Resident found 4 forceps yesterday and 25 more today. How many forceps in all? = 29 (O)

Clue 4 (Fractions of a number): "SHAVED HAIR STUBBLE WAS ON THE SCRUB SUIT"

$5/10$ of 10 = 5 (S) · $4/10$ of 85 = 34 (C) · $2/10$ of 200 = 40 (A) · $2/8$ of 28 = 7 (L) · $1/4$ of 128 = 32 (I) · $2/10$ of 70 = 14 (E) · $1/4$ of 8 = 2 (D) · $3/10$ of 20 = 6 (B) · $1/4$ of 92 = 23 (V) · $1/6$ of 102 = 17 (N) · $3/10$ of 90 = 27 (U) · $3/8$ of 88 = 33 (T) · $2/3$ of 57 = 38 (O) · $1/3$ of 87 = 29 (W) · $3/4$ of 24 = 18 (H) · $1/6$ of 186 = 31 (R)

Clue 5 (Division facts (1-12)): surviving statement is box 11 → Dr Hideyo Noguchi

$36 \div 9 = 4$ · $30 \div 10 = 3$ · $54 \div 9 = 6$ · $120 \div 10 = 12$ · $90 \div 10 = 9$ · $25 \div 5 = 5$ · $90 \div 9 = 10$ · $77 \div 11 = 7$ · $80 \div 10 = 8$ · $20 \div 10 = 2$ · $8 \div 8 = 1$