



The Supersonic Showdown Sabotage

Grade 5 math · Addition, Multiplication, Place value, Rounding, Division · Reading level grades 5-6

Detective: _____ **Date:** _____

During the high-stakes supersonic aviation trial between rival delta-wing crews, a mysterious saboteur locked the chief flight director inside the telemetry vault and scrambled the official test logs! Detective, solve the math clues to uncover the culprit before takeoff.

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 saboteur is _____

Possible suspects

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

NAME	PRIMARY JET	AVIONICS DEVICE	PILOT HABIT	HELMET COLOR	SYSTEM FLAW
Guy Dabert	Stratosphere Star	Canard Controller	Right Handed Switch	Midnight Black	Hydraulic Failure
Alan Smith	Concorde Prototype	Flight Recorder	Left Handed Switch	Midnight Black	Fuel Leak
Charles Bigot	Sonic Arrow	Flight Recorder	Left Handed Switch	Flame Red	Engine Stall
Nikolai Voronov	Sonic Arrow	Canard Controller	Left Handed Switch	Midnight Black	Engine Stall
Yuri Gorbatko	Tu-144 Charger	Canard Controller	Left Handed Switch	Midnight Black	Hydraulic Failure
John Cochrane	Tu-144 Charger	Afterburner Dial	Left Handed Switch	Midnight Black	Hydraulic Failure
Vasily Romanov	Concorde Prototype	Afterburner Dial	Right Handed Switch	Silver Metallic	Fuel Leak
Eduard Yelyan	Aero Delta One	Telemetry Deck	Right Handed Switch	Silver Metallic	Engine Stall
Sergei Petrov	Sonic Arrow	Telemetry Deck	Right Handed Switch	Midnight Black	Hydraulic Failure
Peter Baker	Tu-144 Charger	Flight Recorder	Left Handed Switch	Silver Metallic	Hydraulic Failure
Viktor Benderov	Aero Delta One	Flight Recorder	Right Handed Switch	Flame Red	Fuel Leak
Brian Trubshaw	Aero Delta One	Telemetry Deck	Right Handed Switch	Midnight Black	Fuel Leak
Mikhail Kozlov	Sonic Arrow	Canard Controller	Left Handed Switch	Midnight Black	Fuel Leak
Gordon Corfield	Concorde Prototype	Radar Scope	Right Handed Switch	Midnight Black	Engine Stall
Henri Perrier	Concorde Prototype	Flight Recorder	Right Handed Switch	Midnight Black	Engine Stall
Oleg Smirnov	Tu-144 Charger	Flight Recorder	Right Handed Switch	Midnight Black	Fuel Leak
Valery Popov	Concorde Prototype	Flight Recorder	Right Handed Switch	Midnight Black	Fuel Leak
Roy Radford	Aero Delta One	Flight Recorder	Left Handed Switch	Silver Metallic	Engine Stall
Alexei Morozov	Concorde Prototype	Canard Controller	Right Handed Switch	Midnight Black	Fuel Leak
Andre Turcat	Stratosphere Star	Telemetry Deck	Right Handed Switch	Midnight Black	Fuel Leak
Boris Kuzmin	Aero Delta One	Afterburner Dial	Left Handed Switch	Flame Red	Engine Stall

CLUE 1 Addition

You tally up the recovered logbook pages left behind in the hangar to expose the first suspect detail.

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

T								T											T
9722	5341	2059	6346	4004	6037	2690	9722	2059	8315	7904	3225	2690	2059	6346	3990	2690	9722		
													T						
8315	6346	2059	3290	4004	3990	4004	7904	3225	3290	2690	3990	9722	7904	2690	6718	6718	2059	7904	

$$4960 + 4762 = \boxed{} \rightarrow \boxed{\text{T}}$$

$$2503 + 4215 = \boxed{} \rightarrow \boxed{\text{L}}$$

$$4032 + 4283 = \boxed{} \rightarrow \boxed{\text{U}}$$

$$1915 + 1375 = \boxed{} \rightarrow \boxed{\text{C}}$$

$$4157 + 2189 = \boxed{} \rightarrow \boxed{\text{S}}$$

$$4018 + 3886 = \boxed{} \rightarrow \boxed{\text{R}}$$

$$2216 + 3821 = \boxed{} \rightarrow \boxed{\text{B}}$$

$$2171 + 1819 = \boxed{} \rightarrow \boxed{\text{N}}$$

$$1261 + 1429 = \boxed{} \rightarrow \boxed{\text{O}}$$

$$3451 + 1890 = \boxed{} \rightarrow \boxed{\text{H}}$$

$$1485 + 1740 = \boxed{} \rightarrow \boxed{\text{D}}$$

$$629 + 1430 = \boxed{} \rightarrow \boxed{\text{E}}$$

$$2211 + 1793 = \boxed{} \rightarrow \boxed{\text{A}}$$

Scratch space:

CLUE 2

Multiplication facts (1-12)

By calculating total engine output across multiple turbine rows, you decode the second clue.

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

W									W					
20	70	15	80	55	48	48	48	42	20	120	70	110	56	15

							W									
56	42	80	3	55	3	48	20	70	15	99	56	72	48	42	110	55

$4 \times 5 = \square \rightarrow \boxed{W}$

$12 \times 10 = \square \rightarrow \boxed{R}$

$9 \times 8 = \square \rightarrow \boxed{U}$

$1 \times 3 = \square \rightarrow \boxed{D}$

$3 \times 5 = \square \rightarrow \boxed{T}$

$11 \times 9 = \square \rightarrow \boxed{C}$

$7 \times 8 = \square \rightarrow \boxed{H}$

$10 \times 11 = \square \rightarrow \boxed{G}$

$10 \times 7 = \square \rightarrow \boxed{I}$

$11 \times 5 = \square \rightarrow \boxed{E}$

$8 \times 10 = \square \rightarrow \boxed{N}$

$7 \times 6 = \square \rightarrow \boxed{A}$

$4 \times 12 = \square \rightarrow \boxed{S}$

Scratch space:

CLUE 3

Place value

Examining the place value of the digits flashing on the altitude gauge reveals the third piece of evidence.

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

V																			
100	80	9000	8000	1000	2000	60	30	9000	1000	900	5000	4000	80	1000	9000	9000	1000	60	70

3000	2000	5000	30	9000	1000	700	800

What is the value of the 1 in 289,154? → **V**

What is the value of the 8 in 911,189? → **U**

What is the value of the 5 in 325,918? → **O**

What is the value of the 9 in 89,667? → **L**

What is the value of the 8 in 17,859? → **S**

What is the value of the 9 in 38,936? → **T**

What is the value of the 3 in 20,134? → **B**

What is the value of the 2 in 832,086? → **R**

What is the value of the 4 in 84,656? → **F**

What is the value of the 7 in 58,712? → **M**

What is the value of the 1 in 51,529? → **E**

What is the value of the 8 in 768,266? → **N**

What is the value of the 6 in 50,869? → **A**

What is the value of the 3 in 83,250? → **P**

What is the value of the 7 in 42,879? → **K**

Scratch space:

CLUE 4

Rounding

The radar unit rounds distance values to the nearest hundred, pinpointing the fourth clue.

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

H													
430	370	200	290	370	2000	1700	5000	200	5000	70	1300	20	2300

						H						
290	30	9000	170	30	500	430	2000	2900	200	20	1700	4300

Round 428 to the nearest ten → **H**

Round 522 to the nearest hundred → **G**

Round 1,727 to the nearest hundred → **C**

Round 1,983 to the nearest thousand → **T**

Round 70 to the nearest ten → **R**

Round 34 to the nearest ten → **I**

Round 9,076 to the nearest thousand → **D**

Round 4,258 to the nearest hundred → **K**

Round 155 to the nearest hundred → **L**

Round 2,873 to the nearest hundred → **B**

Round 24 to the nearest ten → **A**

Round 2,252 to the nearest hundred → **S**

Round 288 to the nearest ten → **M**

Round 374 to the nearest ten → **E**

Round 1,283 to the nearest hundred → **W**

Round 169 to the nearest ten → **N**

Round 5,441 to the nearest thousand → **O**

Scratch space:

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

Dividing the ground crew diagnostic tasks evenly among technicians uncovers the final clue.

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:

$56 \div 8 = \boxed{}$

$108 \div 12 = \boxed{}$

$80 \div 10 = \boxed{}$

$24 \div 12 = \boxed{}$

$110 \div 10 = \boxed{}$

$3 \div 3 = \boxed{}$

$4 \div 1 = \boxed{}$

$66 \div 11 = \boxed{}$

$48 \div 4 = \boxed{}$

$25 \div 5 = \boxed{}$

$40 \div 4 = \boxed{}$

Step 2 - cross out the sentence with each answer:

1. The villain commanded the Stratosphere Star, then tampered with the radar scope.
2. The villain piloted the Tu-144 Charger, then hacked the telemetry deck.
3. The villain piloted the Tu-144 Charger, then stole the flight recorder.
4. The villain commanded the Stratosphere Star, then swapped the canard controller.
5. The villain hijacked the Concorde Prototype, then hacked the telemetry deck.
6. The villain flew the Sonic Arrow, then disabled the afterburner dial.
7. The villain hijacked the Concorde Prototype, then stole the flight recorder.
8. The villain commanded the Stratosphere Star, then hacked the telemetry deck.
9. The villain steered the Aero Delta One, then hacked the telemetry deck.
10. The villain steered the Aero Delta One, then stole the flight recorder.
11. The villain piloted the Tu-144 Charger, then disabled the afterburner dial.
12. The villain commanded the Stratosphere Star, then stole the flight recorder.

Answer Key

The Supersonic Showdown Sabotage

Culprit: Oleg Smirnov

Tu-144 Charger · Flight Recorder · Right Handed Switch · Midnight Black · Fuel Leak

Trail: Start 21 → Clue 1 16 → Clue 2 10 → Clue 3 6 → Clue 4 4 → Clue 5 1

Clue 1 (Addition): "THE SABOTEUR DOES NOT USE CANARD CONTROLLER"

$4960 + 4762 = 9722$ (T) · $2503 + 4215 = 6718$ (L) · $4032 + 4283 = 8315$ (U) · $1915 + 1375 = 3290$ (C) · $4157 + 2189 = 6346$ (S) · $4018 + 3886 = 7904$ (R) · $2216 + 3821 = 6037$ (B) · $2171 + 1819 = 3990$ (N) · $1261 + 1429 = 2690$ (O) · $3451 + 1890 = 5341$ (H) · $1485 + 1740 = 3225$ (D) · $629 + 1430 = 2059$ (E) · $2211 + 1793 = 4004$ (A)

Clue 2 (Multiplication facts (1-12)): "WITNESS SAW RIGHT HANDED SWITCH USAGE"

$4 \times 5 = 20$ (W) · $12 \times 10 = 120$ (R) · $9 \times 8 = 72$ (U) · $1 \times 3 = 3$ (D) · $3 \times 5 = 15$ (T) · $11 \times 9 = 99$ (C) · $7 \times 8 = 56$ (H) · $10 \times 11 = 110$ (G) · $10 \times 7 = 70$ (I) · $11 \times 5 = 55$ (E) · $8 \times 10 = 80$ (N) · $7 \times 6 = 42$ (A) · $4 \times 12 = 48$ (S)

Clue 3 (Place value): "VULNERABLE TO FUEL LEAK PROBLEMS"

What is the value of the 1 in 289,154? = 100 (V) · What is the value of the 8 in 911,189? = 80 (U) · What is the value of the 5 in 325,918? = 5000 (O) · What is the value of the 9 in 89,667? = 9000 (L) · What is the value of the 8 in 17,859? = 800 (S) · What is the value of the 9 in 38,936? = 900 (T) · What is the value of the 3 in 20,134? = 30 (B) · What is the value of the 2 in 832,086? = 2000 (R) · What is the value of the 4 in 84,656? = 4000 (F) · What is the value of the 7 in 58,712? = 700 (M) · What is the value of the 1 in 51,529? = 1000 (E) · What is the value of the 8 in 768,266? = 8000 (N) · What is the value of the 6 in 50,869? = 60 (A) · What is the value of the 3 in 83,250? = 3000 (P) · What is the value of the 7 in 42,879? = 70 (K)

Clue 4 (Rounding): "HELMET COLOR WAS MIDNIGHT BLACK"

Round 428 to the nearest ten = 430 (H) · Round 522 to the nearest hundred = 500 (G) · Round 1,727 to the nearest hundred = 1700 (C) · Round 1,983 to the nearest thousand = 2000 (T) · Round 70 to the nearest ten = 70 (R) · Round 34 to the nearest ten = 30 (I) · Round 9,076 to the nearest thousand = 9000 (D) · Round 4,258 to the nearest hundred = 4300 (K) · Round 155 to the nearest hundred = 200 (L) · Round 2,873 to the nearest hundred = 2900 (B) · Round 24 to the nearest ten = 20 (A) · Round 2,252 to the nearest hundred = 2300 (S) · Round 288 to the nearest ten = 290 (M) · Round 374 to the nearest ten = 370 (E) · Round 1,283 to the nearest hundred = 1300 (W) · Round 169 to the nearest ten = 170 (N) · Round 5,441 to the nearest thousand = 5000 (O)

Clue 5 (Division facts (1-12)): surviving statement is box 3 → Oleg Smirnov

$56 \div 8 = 7$ · $108 \div 12 = 9$ · $80 \div 10 = 8$ · $24 \div 12 = 2$ · $110 \div 10 = 11$ · $3 \div 3 = 1$ · $4 \div 1 = 4$ · $66 \div 11 = 6$ · $48 \div 4 = 12$ · $25 \div 5 = 5$ · $40 \div 4 = 10$