



The Aegis Cannon Caper

Grade 5 math · Addition, Subtraction, Multiplication, Fractions of a number, Division · Reading level grades 5-6

Detective: _____ Date: _____

An unauthorized agent has overridden the targeting matrix on the Orbital Strike Cannon. We must identify the saboteur and lock down the controls before the countdown reaches zero!

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 operator is _____

Possible suspects

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

NAME	PRIMARY ABILITY	SECONDARY ABILITY	FLIGHT STANCE	HELMET HAIR COLOR	SYSTEM VULNERABILITY
Sgt Zenith	Shield-draining	Nano-repair bots	Right-handed pilot	Dark purple hair	Intense solar flares
Sgt Ridley	Shield-draining	Nano-repair bots	Right-handed pilot	Dark purple hair	High frequency static
Officer Chen	Laser-hacking	Nano-repair bots	Right-handed pilot	Dark purple hair	Strong magnetic fields
Marshal Kira	Laser-hacking	Nano-repair bots	Right-handed pilot	Bright silver hair	Intense solar flares
Chief West	Thruster-boosting	Thermal beams	Left-handed pilot	Bright silver hair	High frequency static
Ensign Burke	Laser-hacking	Sonic disruptors	Left-handed pilot	Bright silver hair	Intense solar flares
Captain Vance	Shield-draining	Thermal beams	Right-handed pilot	Neon blue hair	High frequency static
Dr Apex	Code-cracking	Thermal beams	Left-handed pilot	Neon blue hair	High frequency static
Agent Solaris	Thruster-boosting	Cloaking fields	Right-handed pilot	Dark purple hair	Strong magnetic fields
Cadet Nebula	Code-cracking	Sonic disruptors	Right-handed pilot	Dark purple hair	Intense solar flares
Pilot Gideon	Gravity-bending	Nano-repair bots	Right-handed pilot	Bright silver hair	Strong magnetic fields
Agent Thorne	Code-cracking	Nano-repair bots	Right-handed pilot	Bright silver hair	Intense solar flares
Dr Henderson	Code-cracking	Quantum decoys	Right-handed pilot	Dark purple hair	Strong magnetic fields
Commander Jax	Gravity-bending	Sonic disruptors	Right-handed pilot	Bright silver hair	High frequency static
Scout Rylan	Shield-draining	Thermal beams	Right-handed pilot	Dark purple hair	High frequency static
Engineer Silas	Thruster-boosting	Thermal beams	Left-handed pilot	Neon blue hair	High frequency static
Pilot Drake	Gravity-bending	Sonic disruptors	Right-handed pilot	Dark purple hair	Strong magnetic fields
Specialist Vega	Gravity-bending	Cloaking fields	Left-handed pilot	Dark purple hair	Strong magnetic fields
Cadet Orion	Shield-draining	Sonic disruptors	Right-handed pilot	Dark purple hair	Strong magnetic fields
Navigator Nova	Shield-draining	Quantum decoys	Left-handed pilot	Neon blue hair	High frequency static
Major Echo	Shield-draining	Sonic disruptors	Right-handed pilot	Dark purple hair	Intense solar flares

CLUE 1 Addition

We checked the inventory of spare parts in the weapon depot. Adding up all the secure storage lockers gave us the code to unlock this first file.

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

T																T
5780	7663	9722	3901	5663	8100	8100	5538	5663	2883	7581	6902	9722	4602	2883	6902	5780
6738	4602	9722	6514	6738	5538	2883	5780	6738	7762	7581	9722	5933	6902	8711	4602	

$2368 + 3412 = \square \rightarrow$ T	$2631 + 1971 = \square \rightarrow$ S	$2941 + 3573 = \square \rightarrow$ Q
$4086 + 5636 = \square \rightarrow$ E	$2519 + 3144 = \square \rightarrow$ I	$2954 + 4808 = \square \rightarrow$ M
$2120 + 1781 = \square \rightarrow$ V	$3462 + 4638 = \square \rightarrow$ L	$1939 + 944 = \square \rightarrow$ N
$3675 + 3906 = \square \rightarrow$ D	$2503 + 3035 = \square \rightarrow$ A	$4482 + 2420 = \square \rightarrow$ O
$3628 + 2305 = \square \rightarrow$ C	$2507 + 4231 = \square \rightarrow$ U	$4124 + 3539 = \square \rightarrow$ H
$2930 + 5781 = \square \rightarrow$ Y		

Scratch space:

CLUE 2 Subtraction

The backup reactor energy levels are dropping rapidly. By subtracting the current charge from the target level, we found the key to clear the system alarm.

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

A							A									
5947	3363	7984	8502	1530	7472	1530	5947	2586	2278	4925	2278	8344	7984	3656	2481	7472

A																			
5947	1516	1516	2481	1964	8344	3656	7984	7021	1530	4925	2278	7472	1530	4925	1516	3363	7984	1964	4925

$7054 - 1107 = \square \rightarrow \text{A}$	$5610 - 1954 = \square \rightarrow \text{L}$	$8131 - 4768 = \square \rightarrow \text{R}$
$11348 - 3876 = \square \rightarrow \text{T}$	$3118 - 1602 = \square \rightarrow \text{C}$	$5310 - 3032 = \square \rightarrow \text{D}$
$8179 - 3254 = \square \rightarrow \text{E}$	$11460 - 2958 = \square \rightarrow \text{G}$	$2848 - 1318 = \square \rightarrow \text{H}$
$3389 - 908 = \square \rightarrow \text{O}$	$11166 - 3182 = \square \rightarrow \text{I}$	$13282 - 4938 = \square \rightarrow \text{P}$
$10385 - 3364 = \square \rightarrow \text{S}$	$4290 - 2326 = \square \rightarrow \text{M}$	$7140 - 4554 = \square \rightarrow \text{N}$

Scratch space:

Multiplication facts (1-12)

We inspected the targeting grid on the terminal screen. Multiplying the rows of laser sensors by the columns of receivers revealed the hidden decryption sequence.

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

6 12 16 22 21 42 81 27 42 21 60 12 14 110 56 14 60 49 66 6

6 49 22 45 60 66 12 18 60 6 27 44 22 12 60 120 16

$$2 \times 3 = \boxed{} \rightarrow \boxed{\mathbf{S}}$$

$$7 \times 2 = \boxed{} \rightarrow \left[\begin{array}{c} 1 \\ 4 \end{array} \right]$$

$$7 \times 7 = \boxed{} \rightarrow \left[\begin{array}{c} \text{L} \\ \text{L} \end{array} \right]$$

$$2 \times 11 = \boxed{} \rightarrow \boxed{0}$$

$9 \times 9 =$ $\rightarrow$ **M**

$2 \times 9 = \square \rightarrow \mathbf{H}$

$5 \times 9 = \square \rightarrow \boxed{\mathbf{W}}$

$12 \times 1 = \boxed{} \rightarrow \boxed{\text{T}}$

$10 \times 12 = \boxed{} \rightarrow \boxed{\text{U}}$

$9 \times 3 = \square \rightarrow \mathbf{A}$

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

$11 \times 6 = \boxed{} \rightarrow \boxed{\text{D}}$

$7 \times 8 = \boxed{} \rightarrow \boxed{\text{F}}$

$12 \times 5 = \boxed{} \rightarrow \boxed{\text{E}}$

$$4 \times 11 = \boxed{} \rightarrow \boxed{\mathbf{B}}$$

$10 \times 11 = \boxed{} \rightarrow \boxed{\text{C}}$

$7 \times 6 = \square \rightarrow \mathbf{G}$

$$2 \times 8 = \boxed{} \rightarrow \boxed{\text{R}}$$

Scratch space:

CLUE 4
Fractions of a number

The escape pod bay requires a specific fractional charge to open its diagnostics. We calculated the exact portion of power needed to boot up the scanner.

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

P			P																
16	2	32	16	14	18	26	33	6	32	31	33	9	25	33	2	13	26	8	
21	19	8	26	18	9	18	33	8	25	2	9	26	6	21	19				

$1/8 \text{ of } 128 = \square \rightarrow \text{P}$

$2/5 \text{ of } 35 = \square \rightarrow \text{L}$

$2/5 \text{ of } 5 = \square \rightarrow \text{U}$

$6/8 \text{ of } 8 = \square \rightarrow \text{I}$

$6/8 \text{ of } 12 = \square \rightarrow \text{S}$

$3/10 \text{ of } 110 = \square \rightarrow \text{A}$

$4/8 \text{ of } 36 = \square \rightarrow \text{E}$

$1/6 \text{ of } 78 = \square \rightarrow \text{G}$

$1/8 \text{ of } 168 = \square \rightarrow \text{O}$

$1/2 \text{ of } 50 = \square \rightarrow \text{C}$

$1/4 \text{ of } 128 = \square \rightarrow \text{R}$

$2/5 \text{ of } 20 = \square \rightarrow \text{T}$

$1/2 \text{ of } 62 = \square \rightarrow \text{W}$

$1/5 \text{ of } 95 = \square \rightarrow \text{N}$

$2/10 \text{ of } 130 = \square \rightarrow \text{H}$

Scratch space:

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

The terminal required us to distribute the thermal coolant packs evenly among the cooling vents. Dividing the total packs by the vents unlocked the final profile.

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:

$4 \div 4 = \boxed{}$

$20 \div 2 = \boxed{}$

$72 \div 9 = \boxed{}$

$4 \div 2 = \boxed{}$

$15 \div 5 = \boxed{}$

$20 \div 4 = \boxed{}$

$77 \div 11 = \boxed{}$

$99 \div 11 = \boxed{}$

$12 \div 3 = \boxed{}$

$36 \div 6 = \boxed{}$

$60 \div 5 = \boxed{}$

Step 2 - cross out the sentence with each answer:

1. The villain altered gravity inside the station, then stunned the guards with sonic disruptors.
2. The villain overloaded the booster thrusters, then stunned the guards with sonic disruptors.
3. The villain altered gravity inside the station, then distracted the radar with quantum decoys.
4. The villain overloaded the booster thrusters, then melted the lock using a thermal beam.
5. The villain cracked the launch authorization codes, then distracted the radar with quantum decoys.
6. The villain altered gravity inside the station, then vanished using a cloaking field.
7. The villain cracked the launch authorization codes, then repaired the damaged wires with nanobots.
8. The villain overloaded the booster thrusters, then vanished using a cloaking field.
9. The villain drained the main defense shields, then distracted the radar with quantum decoys.
10. The villain hacked the cannon mainframe with lasers, then repaired the damaged wires with nanobots.
11. The villain drained the main defense shields, then stunned the guards with sonic disruptors.
12. The villain altered gravity inside the station, then repaired the damaged wires with nanobots.

Answer Key

The Aegis Cannon Caper

Culprit: Cadet Orion

Shield-draining · Sonic disruptors · Right-handed pilot · Dark purple hair · Strong magnetic fields

Trail: Start 21 → Clue 1 19 → Clue 2 14 → Clue 3 5 → Clue 4 4 → Clue 5 1

Clue 1 (Addition): "THE VILLAIN DOES NOT USE QUANTUM DECOYS"

$2368 + 3412 = 5780$ (T) · $2631 + 1971 = 4602$ (S) · $2941 + 3573 = 6514$ (Q) · $4086 + 5636 = 9722$ (E) · $2519 + 3144 = 5663$ (I) · $2954 + 4808 = 7762$ (M) · $2120 + 1781 = 3901$ (V) · $3462 + 4638 = 8100$ (L) · $1939 + 944 = 2883$ (N) · $3675 + 3906 = 7581$ (D) · $2503 + 3035 = 5538$ (A) · $4482 + 2420 = 6902$ (O) · $3628 + 2305 = 5933$ (C) · $2507 + 4231 = 6738$ (U) · $4124 + 3539 = 7663$ (H) · $2930 + 5781 = 8711$ (Y)

Clue 2 (Subtraction): "A RIGHT HANDED PILOT ACCOMPLISHED THE CRIME"

$7054 - 1107 = 5947$ (A) · $5610 - 1954 = 3656$ (L) · $8131 - 4768 = 3363$ (R) · $11348 - 3876 = 7472$ (T) · $3118 - 1602 = 1516$ (C) · $5310 - 3032 = 2278$ (D) · $8179 - 3254 = 4925$ (E) · $11460 - 2958 = 8502$ (G) · $2848 - 1318 = 1530$ (H) · $3389 - 908 = 2481$ (O) · $11166 - 3182 = 7984$ (I) · $13282 - 4938 = 8344$ (P) · $10385 - 3364 = 7021$ (S) · $4290 - 2326 = 1964$ (M) · $7140 - 4554 = 2586$ (N)

Clue 3 (Multiplication facts (1-12)): "STRONG MAGNETIC FIELDS SLOWED THE SABOTEUR"

$2 \times 3 = 6$ (S) · $7 \times 2 = 14$ (I) · $7 \times 7 = 49$ (L) · $2 \times 11 = 22$ (O) · $9 \times 9 = 81$ (M) · $2 \times 9 = 18$ (H) · $5 \times 9 = 45$ (W) · $12 \times 1 = 12$ (T) · $10 \times 12 = 120$ (U) · $9 \times 3 = 27$ (A) · $3 \times 7 = 21$ (N) · $11 \times 6 = 66$ (D) · $7 \times 8 = 56$ (F) · $12 \times 5 = 60$ (E) · $4 \times 11 = 44$ (B) · $10 \times 11 = 110$ (C) · $7 \times 6 = 42$ (G) · $2 \times 8 = 16$ (R)

Clue 4 (Fractions of a number): "PURPLE HAIR WAS CAUGHT ON THE SEAT CUSHION"

$\frac{1}{8}$ of 128 = 16 (P) · $\frac{2}{5}$ of 35 = 14 (L) · $\frac{2}{5}$ of 5 = 2 (U) · $\frac{6}{8}$ of 8 = 6 (I) · $\frac{6}{8}$ of 12 = 9 (S) · $\frac{3}{10}$ of 110 = 33 (A) · $\frac{4}{8}$ of 36 = 18 (E) · $\frac{1}{6}$ of 78 = 13 (G) · $\frac{1}{8}$ of 168 = 21 (O) · $\frac{1}{2}$ of 50 = 25 (C) · $\frac{1}{4}$ of 128 = 32 (R) · $\frac{2}{5}$ of 20 = 8 (T) · $\frac{1}{2}$ of 62 = 31 (W) · $\frac{1}{5}$ of 95 = 19 (N) · $\frac{2}{10}$ of 130 = 26 (H)

Clue 5 (Division facts (1-12)): surviving statement is box 11 → Cadet Orion

$4 \div 4 = 1$ · $20 \div 2 = 10$ · $72 \div 9 = 8$ · $4 \div 2 = 2$ · $15 \div 5 = 3$ · $20 \div 4 = 5$ · $77 \div 11 = 7$ · $99 \div 11 = 9$ · $12 \div 3 = 4$ · $36 \div 6 = 6$ · $60 \div 5 = 12$