



The Mystery of the Exploded Nerf Cram

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

Detective: _____ **Date:** _____

A deafening POP rocked the base as the experimental Nerf Cram engine exploded, coating the entire command deck in glowing green gel and shredded foam. Chief Joshua Dax Zeno zipped up his tactical vest and grabbed his magnifying glass. It was time to find out who sabotaged the ultimate blaster experiment before the next big squad tournament.

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 Foam 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 BLASTER	AMMO UPGRADE	FIRING STANCE	HAIR STYLE	DEFENSE WEAKNESS
Gemma Grip	Cyclone Drum Pistol	High-Velocity Fins	Right-Handed Shooter	Spiky Red Mohawk	Squeaky Shoes
Zack Blaster	Double-Barrel Blaster	Mega-Darts	Right-Handed Shooter	Spiky Red Mohawk	Bright Laser Pointers
Maya Scope	Double-Barrel Blaster	High-Velocity Fins	Left-Handed Shooter	Curly Blue Hair	Squeaky Shoes
Chloe Hopper	Motorized Bow	Glow-In-The-Dark Foam	Left-Handed Shooter	Blonde Buzzcut	Slippery Soap Foam
Finn Bungee	Spring-Action Carbine	Glow-In-The-Dark Foam	Left-Handed Shooter	Curly Blue Hair	Slippery Soap Foam
Sadie Sight	Motorized Bow	Mega-Darts	Right-Handed Shooter	Curly Blue Hair	Slippery Soap Foam
Ivy Jammer	Cyclone Drum Pistol	Glow-In-The-Dark Foam	Left-Handed Shooter	Curly Blue Hair	Slippery Soap Foam
Brooke Barrel	Ultra-Shot Rifle	Screaming-Whistle Tips	Left-Handed Shooter	Curly Blue Hair	Squeaky Shoes
Ella Stock	Spring-Action Carbine	Mega-Darts	Right-Handed Shooter	Spiky Red Mohawk	Slippery Soap Foam
Leo Trigger	Motorized Bow	High-Velocity Fins	Left-Handed Shooter	Spiky Red Mohawk	Bright Laser Pointers
Zoe Loader	Cyclone Drum Pistol	Screaming-Whistle Tips	Left-Handed Shooter	Curly Blue Hair	Slippery Soap Foam
Owen Target	Cyclone Drum Pistol	Suction-Cup Shells	Right-Handed Shooter	Curly Blue Hair	Slippery Soap Foam
Max Trigger	Ultra-Shot Rifle	Screaming-Whistle Tips	Right-Handed Shooter	Curly Blue Hair	Squeaky Shoes
Eli Spring	Ultra-Shot Rifle	High-Velocity Fins	Left-Handed Shooter	Curly Blue Hair	Squeaky Shoes
Luke Goggles	Cyclone Drum Pistol	Screaming-Whistle Tips	Left-Handed Shooter	Blonde Buzzcut	Slippery Soap Foam
Cole Crank	Spring-Action Carbine	Screaming-Whistle Tips	Left-Handed Shooter	Curly Blue Hair	Slippery Soap Foam
Toby Pump	Double-Barrel Blaster	Mega-Darts	Left-Handed Shooter	Blonde Buzzcut	Slippery Soap Foam
Jax Tactical	Spring-Action Carbine	High-Velocity Fins	Left-Handed Shooter	Curly Blue Hair	Squeaky Shoes
Ruby Laser	Double-Barrel Blaster	Screaming-Whistle Tips	Left-Handed Shooter	Curly Blue Hair	Slippery Soap Foam
Lily Clip	Ultra-Shot Rifle	Screaming-Whistle Tips	Left-Handed Shooter	Curly Blue Hair	Slippery Soap Foam
Mia Foam	Ultra-Shot Rifle	Suction-Cup Shells	Right-Handed Shooter	Curly Blue Hair	Bright Laser Pointers

CLUE 1

Chief Joshua Dax Zeno gathers the spent Nerf darts scattered across the laboratory floor. Adding the different colors together reveals the secret locker combination.

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

4137 2609 2445 5124 3286 7444 8872 4137 2445 3970 7965 6339 8872 2445 5124 2905 8872 4137

3970 5124 2445 8991 6736 8872 2601 5765 8872 3286 2616

$$2864 + 1273 = \boxed{} \rightarrow \boxed{\text{T}}$$

$1273 + 2697 = \boxed{} \rightarrow \boxed{\text{U}}$

$$3003 + 2121 = \boxed{} \rightarrow \boxed{\text{S}}$$

$$4634 + 3331 = \boxed{} \rightarrow \boxed{\text{R}}$$

$$1615 + 994 = \boxed{} \rightarrow \boxed{\text{H}}$$

$1712 + 889 = \square \rightarrow \boxed{\mathbf{W}}$

$$5305 + 3686 = \boxed{} \rightarrow \boxed{\text{G}}$$

$3908 + 1857 = \boxed{} \rightarrow \boxed{\text{F}}$

$$4605 + 4267 = \boxed{} \rightarrow \boxed{0}$$

$1717 + 1569 = \boxed{} \rightarrow \boxed{\text{A}}$

$1100 + 1345 = \boxed{} \rightarrow \mathbf{E}$

$1293 + 1612 = \boxed{} \rightarrow \boxed{\text{N}}$

$$4394 + 2342 = \boxed{} \rightarrow \boxed{\text{L}}$$

$$1107 + 1509 = \boxed{} \rightarrow \boxed{\text{M}}$$

$2792 + 4652 = \boxed{} \rightarrow \mathbf{B}$

$$3194 + 3145 = \boxed{} \rightarrow \boxed{\text{D}}$$

Scratch space:

Subtraction

To find the pressure leak in the Cram-Engine, Chief Joshua subtracts the empty air pressure from the full charge to pinpoint the saboteur's custom gear.

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

6319 2995 7332 8889 6206 6468 6468 8432 6206 8488 6206 6924 8432 6468 7332 7318 6319

2995 8432 8488 6563 7332 6563 6924 2995 6090 6090 6319 7332 3828

$$10055 - 3736 = \boxed{} \rightarrow \boxed{\text{T}}$$

$11431 - 2999 = \boxed{} \rightarrow \mathbf{A}$

$$10561 - 2073 = \boxed{} \rightarrow \boxed{\text{N}}$$

$$7915 - 1447 = \boxed{} \rightarrow \boxed{\text{L}}$$

$$6473 - 2645 = \boxed{} \rightarrow \boxed{\text{R}}$$

$$7735 - 4740 = \boxed{} \rightarrow \boxed{\text{H}}$$

$$9703 - 814 = \boxed{} \rightarrow \mathbf{V}$$

$9452 - 3246 = \boxed{} \rightarrow \boxed{}$

$10657 - 3325 = \boxed{} \rightarrow \boxed{\text{E}}$

$$10389 - 3071 = \boxed{} \rightarrow \boxed{\mathbf{F}}$$

$$11349 - 4425 = \boxed{} \rightarrow \boxed{\text{S}}$$

$$8686 - 2596 = \boxed{} \rightarrow \boxed{0}$$

$7211 - 648 = \boxed{} \rightarrow \boxed{\text{D}}$

Scratch space:

Multiplication facts (1-12)

The team counts rows of locked ammo canisters stacked in the storage room. Multiplying the grids of gear boxes points to the culprit's favorite setup.

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

50 121 99 8 10 132 44 18 132 4 10 50 99 28 56 8 99 132 56 18

18 88 77 16 16 99 56 80 18 10 132 16

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

$$7 \times 11 = \boxed{} \rightarrow \left[\begin{array}{c} 1 \\ 1 \end{array} \right]$$

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

$4 \times 2 = \boxed{} \rightarrow \boxed{\mathbf{F}}$

$12 \times 11 = \boxed{} \rightarrow \boxed{\mathbf{A}}$

$8 \times 10 =$ $\rightarrow$ **Y**

$4 \times 1 = \boxed{} \rightarrow \boxed{\mathbf{B}}$

$$10 \times 1 = \boxed{} \rightarrow \boxed{0}$$

$$4 \times 7 = \boxed{} \rightarrow \boxed{\mathbf{U}}$$

$8 \times 11 = \boxed{} \rightarrow \boxed{\text{L}}$

$7 \times 8 = \boxed{} \rightarrow \boxed{\mathbf{R}}$

$9 \times 2 = \boxed{} \rightarrow \boxed{\mathbf{S}}$

$11 \times 9 = \square \rightarrow \boxed{\text{E}}$

$11 \times 11 = \boxed{} \rightarrow \boxed{\text{H}}$

$11 \times 4 = \boxed{} \rightarrow \boxed{\text{M}}$

Scratch space:

CLUE 4
Fractions of a number

Chief Joshua inspects the giant foam blast zone. Taking a specific fraction of the stained floor tiles helps narrow down the target to a single physical tell.

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

W															
36	8	2	11	37	32	13	39	18	33	24	32	13	39	11	2
22	37	33	34	31	4	34	37	8	10	24	27	33			

$3/4 \text{ of } 48 = \square \rightarrow \boxed{\text{W}}$

$2/3 \text{ of } 3 = \square \rightarrow \boxed{\text{F}}$

$3/6 \text{ of } 44 = \square \rightarrow \boxed{\text{C}}$

$1/5 \text{ of } 195 = \square \rightarrow \boxed{\text{S}}$

$1/10 \text{ of } 40 = \square \rightarrow \boxed{\text{B}}$

$1/6 \text{ of } 186 = \square \rightarrow \boxed{\text{Y}}$

$2/10 \text{ of } 160 = \square \rightarrow \boxed{\text{N}}$

$1/4 \text{ of } 108 = \square \rightarrow \boxed{\text{I}}$

$4/6 \text{ of } 51 = \square \rightarrow \boxed{\text{L}}$

$3/6 \text{ of } 20 = \square \rightarrow \boxed{\text{H}}$

$2/8 \text{ of } 32 = \square \rightarrow \boxed{\text{E}}$

$1/4 \text{ of } 148 = \square \rightarrow \boxed{\text{U}}$

$1/10 \text{ of } 110 = \square \rightarrow \boxed{\text{O}}$

$1/3 \text{ of } 39 = \square \rightarrow \boxed{\text{D}}$

$1/2 \text{ of } 66 = \square \rightarrow \boxed{\text{R}}$

$1/5 \text{ of } 120 = \square \rightarrow \boxed{\text{A}}$

$1/10 \text{ of } 180 = \square \rightarrow \boxed{\text{T}}$

Scratch space:

CLUE 5**Fractions of a number - the last clue**

The officers find a trail of bright footprints leading out of the testing bay. Analyzing a fraction of these prints uncovers the hair color of the runaway suspect.

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:

$4/8 \text{ of } 2 = \boxed{}$

$5/10 \text{ of } 12 = \boxed{}$

$5/10 \text{ of } 16 = \boxed{}$

$2/8 \text{ of } 12 = \boxed{}$

$4/5 \text{ of } 15 = \boxed{}$

$5/6 \text{ of } 6 = \boxed{}$

$1/3 \text{ of } 21 = \boxed{}$

$1/2 \text{ of } 20 = \boxed{}$

$2/8 \text{ of } 16 = \boxed{}$

$1/10 \text{ of } 20 = \boxed{}$

$1/10 \text{ of } 90 = \boxed{}$

Step 2 - cross out the sentence with each answer:

1. The villain fired the ultra-shot rifle, then screeched screaming-whistle tips over the fence.
2. The villain fired the ultra-shot rifle, then stuck suction-cup shells everywhere.
3. The villain aimed the motorized bow, then loaded the heavy mega-darts.
4. The villain unleashed the cyclone drum pistol, then stuck suction-cup shells everywhere.
5. The villain fired the ultra-shot rifle, then painted the walls with glow-in-the-dark foam.
6. The villain unlocked the double-barrel blaster, then screeched screaming-whistle tips over the fence.
7. The villain unleashed the cyclone drum pistol, then fitted high-velocity fins.
8. The villain unleashed the cyclone drum pistol, then screeched screaming-whistle tips over the fence.
9. The villain cocked the spring-action carbine, then painted the walls with glow-in-the-dark foam.
10. The villain unlocked the double-barrel blaster, then loaded the heavy mega-darts.
11. The villain cocked the spring-action carbine, then screeched screaming-whistle tips over the fence.
12. The villain cocked the spring-action carbine, then stuck suction-cup shells everywhere.

Answer Key

The Mystery of the Exploded Nerf Cram

Culprit: Cole Crank

Spring-Action Carbine · Screaming-Whistle Tips · Left-Handed Shooter · Curly Blue Hair · Slippery Soap Foam

Trail: Start 21 → Clue 1 18 → Clue 2 11 → Clue 3 6 → Clue 4 4 → Clue 5 1

Clue 1 (Addition): "THE SABOTEUR DOES NOT USE GLOW FOAM"

$2864 + 1273 = 4137$ (T) · $1273 + 2697 = 3970$ (U) · $3003 + 2121 = 5124$ (S) · $4634 + 3331 = 7965$ (R) · $1615 + 994 = 2609$ (H) · $1712 + 889 = 2601$ (W) · $5305 + 3686 = 8991$ (G) · $3908 + 1857 = 5765$ (F) · $4605 + 4267 = 8872$ (O) · $1717 + 1569 = 3286$ (A) · $1100 + 1345 = 2445$ (E) · $1293 + 1612 = 2905$ (N) · $4394 + 2342 = 6736$ (L) · $1107 + 1509 = 2616$ (M) · $2792 + 4652 = 7444$ (B) · $3194 + 3145 = 6339$ (D)

Clue 2 (Subtraction): "THE VILLAIN IS A LEFT HANDED SHOOTER"

$10055 - 3736 = 6319$ (T) · $11431 - 2999 = 8432$ (A) · $10561 - 2073 = 8488$ (N) · $7915 - 1447 = 6468$ (L) · $6473 - 2645 = 3828$ (R) · $7735 - 4740 = 2995$ (H) · $9703 - 814 = 8889$ (V) · $9452 - 3246 = 6206$ (I) · $10657 - 3325 = 7332$ (E) · $10389 - 3071 = 7318$ (F) · $11349 - 4425 = 6924$ (S) · $8686 - 2596 = 6090$ (O) · $7211 - 648 = 6563$ (D)

Clue 3 (Multiplication facts (1-12)): "THE FOAM SABOTEUR FEARS SLIPPERY SOAP"

$5 \times 10 = 50$ (T) · $7 \times 11 = 77$ (I) · $8 \times 2 = 16$ (P) · $4 \times 2 = 8$ (F) · $12 \times 11 = 132$ (A) · $8 \times 10 = 80$ (Y) · $4 \times 1 = 4$ (B) · $10 \times 1 = 10$ (O) · $4 \times 7 = 28$ (U) · $8 \times 11 = 88$ (L) · $7 \times 8 = 56$ (R) · $9 \times 2 = 18$ (S) · $11 \times 9 = 99$ (E) · $11 \times 11 = 121$ (H) · $11 \times 4 = 44$ (M)

Clue 4 (Fractions of a number): "WE FOUND STRANDS OF CURLY BLUE HAIR"

$\frac{3}{4}$ of 48 = 36 (W) · $\frac{2}{3}$ of 3 = 2 (F) · $\frac{3}{6}$ of 44 = 22 (C) · $\frac{1}{5}$ of 195 = 39 (S) · $\frac{1}{10}$ of 40 = 4 (B) · $\frac{1}{6}$ of 186 = 31 (Y) · $\frac{2}{10}$ of 160 = 32 (N) · $\frac{1}{4}$ of 108 = 27 (I) · $\frac{4}{6}$ of 51 = 34 (L) · $\frac{3}{6}$ of 20 = 10 (H) · $\frac{2}{8}$ of 32 = 8 (E) · $\frac{1}{4}$ of 148 = 37 (U) · $\frac{1}{10}$ of 110 = 11 (O) · $\frac{1}{3}$ of 39 = 13 (D) · $\frac{1}{2}$ of 66 = 33 (R) · $\frac{1}{5}$ of 120 = 24 (A) · $\frac{1}{10}$ of 180 = 18 (T)

Clue 5 (Fractions of a number): surviving statement is box 11 → Cole Crank

$\frac{4}{8}$ of 2 = 1 · $\frac{5}{10}$ of 12 = 6 · $\frac{5}{10}$ of 16 = 8 · $\frac{2}{8}$ of 12 = 3 · $\frac{4}{5}$ of 15 = 12 · $\frac{5}{6}$ of 6 = 5 · $\frac{1}{3}$ of 21 = 7 · $\frac{1}{2}$ of 20 = 10 · $\frac{2}{8}$ of 16 = 4 · $\frac{1}{10}$ of 20 = 2 · $\frac{1}{10}$ of 90 = 9