



The Case of the Kid Station's Rogue Artisan

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

Detective: _____ Date: _____

At the Precinct 9 Kid Police Station, Chief Joshua Dax Zeno has a major crisis. The station's master Artisan, who helps the junior deputies craft high-tech chalk gear and clay gadgets, has gone rogue! The suspect stole the golden badge mold and painted graffiti all over the chief's desk. Junior detectives need to analyze the clues, solve the math puzzles, and find the Rogue Artisan.

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 Artisan is _____

Possible suspects

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

NAME	CREATIVE SPECIALTY	TACTICAL SKILL	HOLDING GRIP	HAIR STYLE	CAPTURE DEVICE
Officer Jax	neon laser sketching	sonic canvas blasting	left-handed grip	bright gold glitter dye	water gun wash
Officer Sam	graffiti teleportation	sonic canvas blasting	right-handed grip	neon blue paint splatter	water gun wash
Sgt Emma	3D paint creation	color mixing camouflage	right-handed grip	neon blue paint splatter	soap bubble blast
Cadet Max	clay molding mimicry	sonic canvas blasting	left-handed grip	bright gold glitter dye	bright camera flash
Deputy Zoe	clay molding mimicry	sculpture shield block	right-handed grip	bright gold glitter dye	soap bubble blast
Deputy Lily	clay molding mimicry	sculpture shield block	left-handed grip	bright gold glitter dye	soap bubble blast
Officer Ryan	3D paint creation	color mixing camouflage	right-handed grip	bright gold glitter dye	bright camera flash
Sgt Ava	3D paint creation	sculpture shield block	left-handed grip	neon blue paint splatter	water gun wash
Officer Jack	neon laser sketching	glow ink blinding	right-handed grip	pastel pink chalk dust	water gun wash
Deputy Maya	clay molding mimicry	color mixing camouflage	right-handed grip	bright gold glitter dye	water gun wash
Sgt Chloe	neon laser sketching	sonic canvas blasting	right-handed grip	bright gold glitter dye	soap bubble blast
Officer Leo	neon laser sketching	color mixing camouflage	right-handed grip	bright gold glitter dye	soap bubble blast
Cadet Owen	graffiti teleportation	color mixing camouflage	left-handed grip	neon blue paint splatter	water gun wash
Cadet Luke	neon laser sketching	quick dry freezing	left-handed grip	neon blue paint splatter	water gun wash
Cadet Toby	graffiti teleportation	sonic canvas blasting	left-handed grip	pastel pink chalk dust	soap bubble blast
Sgt Nora	graffiti teleportation	sculpture shield block	right-handed grip	neon blue paint splatter	bright camera flash
Deputy Ella	graffiti teleportation	color mixing camouflage	right-handed grip	bright gold glitter dye	soap bubble blast
Deputy Mia	origami folding flight	color mixing camouflage	right-handed grip	bright gold glitter dye	bright camera flash
Cadet Eli	clay molding mimicry	glow ink blinding	right-handed grip	bright gold glitter dye	bright camera flash
Sgt Ruby	graffiti teleportation	sculpture shield block	right-handed grip	pastel pink chalk dust	soap bubble blast
Deputy Anna	3D paint creation	quick dry freezing	right-handed grip	bright gold glitter dye	soap bubble blast

CLUE 1 Addition

Chief Joshua Dax Zeno asks you to count the total number of paint cans left behind. Adding the red cans and the blue cans gives us the first clue to rule out a major power.

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

T					T			T						T				
3002	8172	9847	3801	6787	3002	6838	4931	3002	2678	3801	2921	2921	7693	3002	5052	4931	9847	
														T				
4931	7693	2921	6838	2678	2678	3801	2921	7213	3801	4931	8329	3254	3801	4931	3002	6838	2921	5652

1462 + 1540 = → T	3730 + 3108 = → I	3278 + 4894 = → H
4901 + 4946 = → E	3874 + 3339 = → V	1074 + 2180 = → L
1609 + 1069 = → C	2500 + 1301 = → A	3546 + 2106 = → G
3307 + 4386 = → O	2981 + 5348 = → B	3245 + 3542 = → R
2047 + 3005 = → U	1994 + 927 = → N	3227 + 1704 = → S

Scratch space:

CLUE 2

Subtraction

The thief snatched some brushes from the supply closet. Subtracting the remaining brushes from the starting total reveals a secret note about the suspect's grip.

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

T																	
6546	2161	1947	5448	1214	8652	3067	1947	8736	5448	1947	7724	1947	2161	2374	8736	2374	

				T											
1214	8652	3947	2161	6546	2161	2374	7724	6209	1947	6209	3947	1214	8652	3274	

$10876 - 4330 = \square \rightarrow \text{[T]}$

$5243 - 2869 = \square \rightarrow \text{[A]}$

$4806 - 1532 = \square \rightarrow \text{[P]}$

$4867 - 2706 = \square \rightarrow \text{[H]}$

$8327 - 2879 = \square \rightarrow \text{[C]}$

$12094 - 4370 = \square \rightarrow \text{[N]}$

$5939 - 3992 = \square \rightarrow \text{[E]}$

$9399 - 3190 = \square \rightarrow \text{[D]}$

$7521 - 3574 = \square \rightarrow \text{[G]}$

$11788 - 3136 = \square \rightarrow \text{[I]}$

$5722 - 2655 = \square \rightarrow \text{[M]}$

$11469 - 2733 = \square \rightarrow \text{[S]}$

$4496 - 3282 = \square \rightarrow \text{[R]}$

Scratch space:

CLUE 3
Multiplication facts (1-12)

You find rows of clay jars stacked in the artisan's workshop. Multiplying the rows by the jars in each row unlocks a locked safe containing a weakness report.

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

A			A																
42	108	45	42	8	84	24	84	84	64	12	84	64	42	108	144				

						A													
110	27	64	64	144	49	42	8	144	21	12	60								

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

$4 \times 2 = \square \rightarrow \text{P}$

$12 \times 12 = \square \rightarrow \text{T}$

$12 \times 9 = \square \rightarrow \text{S}$

$3 \times 7 = \square \rightarrow \text{H}$

$5 \times 9 = \square \rightarrow \text{O}$

$7 \times 7 = \square \rightarrow \text{R}$

$11 \times 10 = \square \rightarrow \text{W}$

$10 \times 6 = \square \rightarrow \text{M}$

$7 \times 12 = \square \rightarrow \text{B}$

$8 \times 8 = \square \rightarrow \text{L}$

$8 \times 3 = \square \rightarrow \text{U}$

$12 \times 1 = \square \rightarrow \text{E}$

$3 \times 9 = \square \rightarrow \text{I}$

Scratch space:

CLUE 4
Fractions of a number

A spilled box of colored chalk contains several broken pieces. Finding a fraction of the total pieces helps us analyze the hair dust left on the ceiling.

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

T																T
26	12	15	11	19	24	24	21	12	31	27	3	21	4	33	12	26
							T	T								
33	24	19	6	33	19	4	26	26	15	21	6	22	15			

$4/10 \text{ of } 65 = \square \rightarrow \boxed{\text{T}}$

$1/3 \text{ of } 9 = \square \rightarrow \boxed{\text{B}}$

$3/4 \text{ of } 36 = \square \rightarrow \boxed{\text{S}}$

$1/5 \text{ of } 165 = \square \rightarrow \boxed{\text{G}}$

$1/2 \text{ of } 38 = \square \rightarrow \boxed{\text{L}}$

$3/4 \text{ of } 28 = \square \rightarrow \boxed{\text{R}}$

$5/6 \text{ of } 18 = \square \rightarrow \boxed{\text{E}}$

$1/5 \text{ of } 20 = \square \rightarrow \boxed{\text{I}}$

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

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

$2/6 \text{ of } 66 = \square \rightarrow \boxed{\text{Y}}$

$1/4 \text{ of } 44 = \square \rightarrow \boxed{\text{F}}$

$3/4 \text{ of } 32 = \square \rightarrow \boxed{\text{O}}$

$2/6 \text{ of } 36 = \square \rightarrow \boxed{\text{H}}$

Scratch space:

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

The junior deputies recover a portion of the stolen badges. Calculating this fraction of the stash points to the final clue hidden inside the station's art locker.

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:

$3/5 \text{ of } 15 = \boxed{}$

$3/8 \text{ of } 16 = \boxed{}$

$2/8 \text{ of } 44 = \boxed{}$

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

$6/8 \text{ of } 4 = \boxed{}$

$1/6 \text{ of } 60 = \boxed{}$

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

$1/3 \text{ of } 36 = \boxed{}$

$2/10 \text{ of } 40 = \boxed{}$

$2/6 \text{ of } 21 = \boxed{}$

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

Step 2 - cross out the sentence with each answer:

1. The villain sketches a secret escape route on the wall, then blocks the hallway with a solid stone statue.
2. The villain sketches a secret escape route on the wall, then disappears into a colorful smoke cloud.
3. The villain molds a fake clay double of the evidence vault key, then blinds the security cameras with wet paint.
4. The villain molds a fake clay double of the evidence vault key, then freezes the pursuing officers in drying plaster.
5. The villain mixes a blinding splash of glowing paint, then blocks the hallway with a solid stone statue.
6. The villain sprays neon graffiti over the precinct lockers, then freezes the pursuing officers in drying plaster.
7. The villain mixes a blinding splash of glowing paint, then disappears into a colorful smoke cloud.
8. The villain sprays neon graffiti over the precinct lockers, then blocks the hallway with a solid stone statue.
9. The villain folds a giant paper glider to escape the window, then disappears into a colorful smoke cloud.
10. The villain folds a giant paper glider to escape the window, then blasts high-volume static from a megaphone.
11. The villain molds a fake clay double of the evidence vault key, then disappears into a colorful smoke cloud.
12. The villain mixes a blinding splash of glowing paint, then blasts high-volume static from a megaphone.

Answer Key

The Case of the Kid Station's Rogue Artisan

Culprit: Deputy Zoe

clay molding mimicry · sculpture shield block · right-handed grip · bright gold glitter dye · soap bubble blast

Trail: Start 21 → Clue 1 16 → Clue 2 12 → Clue 3 6 → Clue 4 4 → Clue 5 1

Clue 1 (Addition): "THE ARTIST CANNOT USE SONIC CANVAS BLASTING"

$1462 + 1540 = 3002$ (T) · $3730 + 3108 = 6838$ (I) · $3278 + 4894 = 8172$ (H) · $4901 + 4946 = 9847$ (E) · $3874 + 3339 = 7213$ (V) · $1074 + 2180 = 3254$ (L) · $1609 + 1069 = 2678$ (C) · $2500 + 1301 = 3801$ (A) · $3546 + 2106 = 5652$ (G) · $3307 + 4386 = 7693$ (O) · $2981 + 5348 = 8329$ (B) · $3245 + 3542 = 6787$ (R) · $2047 + 3005 = 5052$ (U) · $1994 + 927 = 2921$ (N) · $3227 + 1704 = 4931$ (S)

Clue 2 (Subtraction): "THE CRIME SCENE HAS A RIGHT HANDED GRIP"

$10876 - 4330 = 6546$ (T) · $5243 - 2869 = 2374$ (A) · $4806 - 1532 = 3274$ (P) · $4867 - 2706 = 2161$ (H) · $8327 - 2879 = 5448$ (C) · $12094 - 4370 = 7724$ (N) · $5939 - 3992 = 1947$ (E) · $9399 - 3190 = 6209$ (D) · $7521 - 3574 = 3947$ (G) · $11788 - 3136 = 8652$ (I) · $5722 - 2655 = 3067$ (M) · $11469 - 2733 = 8736$ (S) · $4496 - 3282 = 1214$ (R)

Clue 3 (Multiplication facts (1-12)): "A SOAP BUBBLE BLAST WILL TRAP THEM"

$7 \times 6 = 42$ (A) · $4 \times 2 = 8$ (P) · $12 \times 12 = 144$ (T) · $12 \times 9 = 108$ (S) · $3 \times 7 = 21$ (H) · $5 \times 9 = 45$ (O) · $7 \times 7 = 49$ (R) · $11 \times 10 = 110$ (W) · $10 \times 6 = 60$ (M) · $7 \times 12 = 84$ (B) · $8 \times 8 = 64$ (L) · $8 \times 3 = 24$ (U) · $12 \times 1 = 12$ (E) · $3 \times 9 = 27$ (I)

Clue 4 (Fractions of a number): "THE FLOOR HAS BRIGHT GOLD GLITTER DYE"

$4/10$ of 65 = 26 (T) · $1/3$ of 9 = 3 (B) · $3/4$ of 36 = 27 (S) · $1/5$ of 165 = 33 (G) · $1/2$ of 38 = 19 (L) · $3/4$ of 28 = 21 (R) · $5/6$ of 18 = 15 (E) · $1/5$ of 20 = 4 (I) · $1/2$ of 62 = 31 (A) · $5/10$ of 12 = 6 (D) · $2/6$ of 66 = 22 (Y) · $1/4$ of 44 = 11 (F) · $3/4$ of 32 = 24 (O) · $2/6$ of 36 = 12 (H)

Clue 5 (Fractions of a number): surviving statement is box 1 → Deputy Zoe

$3/5$ of 15 = 9 · $3/8$ of 16 = 6 · $2/8$ of 44 = 11 · $1/10$ of 40 = 4 · $6/8$ of 4 = 3 · $1/6$ of 60 = 10 · $2/8$ of 8 = 2 · $1/3$ of 36 = 12 · $2/10$ of 40 = 8 · $2/6$ of 21 = 7 · $5/6$ of 6 = 5