



The Junior Police Station Mystery

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

Detective: _____ **Date:** _____

Disaster has struck our neighborhood! Junior Police Precinct Four has been burnt to a crisp. Chief Joshua Dax Zeno's favorite station is in ruins, and we need to find the Soot Bandit before the evidence cools down completely.

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 Soot Bandit is _____

Possible suspects

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

NAME	ESCAPE GEAR	IGNITION TOOL	DOMINANT HAND	HAIR EVIDENCE	CAPTURED BY
Aria Ash	speed skates	magnifying glass	right handed	bright red hair	fear of water
Sam Blazer	laser pointer	flint sparker	left handed	bright red hair	loud sirens
Zoe Sparks	water blaster	magnifying glass	right handed	singed brown hair	loud sirens
Officer Toby	speed skates	fire cracker	right handed	singed brown hair	loud sirens
Zane Cinder	smoke bomb	solar battery	left handed	bright red hair	fear of water
Cadet Lucy	speed skates	fire cracker	left handed	bright red hair	fear of water
Nora Blaze	pocket drone	gas lighter	left handed	bright red hair	loud sirens
Leo Chase	smoke bomb	gas lighter	left handed	bright red hair	loud sirens
Deputy Mia	speed skates	flint sparker	left handed	bright red hair	fear of water
Gavin Smoke	laser pointer	flint sparker	left handed	singed brown hair	loud sirens
Haley Spark	laser pointer	solar battery	right handed	singed brown hair	sticky foam
Sgt Cooper	speed skates	gas lighter	right handed	singed brown hair	fear of water
Eli Smitty	speed skates	fire cracker	left handed	ash blonde hair	fear of water
Ruby Flame	pocket drone	magnifying glass	left handed	bright red hair	fear of water
Cole Burnside	laser pointer	flint sparker	right handed	singed brown hair	fear of water
Maya Ember	pocket drone	flint sparker	left handed	bright red hair	fear of water
Ella Flare	water blaster	magnifying glass	right handed	singed brown hair	sticky foam
Luke Kindle	laser pointer	magnifying glass	right handed	singed brown hair	loud sirens
Cadet Lily	speed skates	magnifying glass	right handed	ash blonde hair	loud sirens
Officer Ben	water blaster	gas lighter	left handed	singed brown hair	fear of water
Sgt Miller	pocket drone	gas lighter	right handed	singed brown hair	loud sirens

CLUE 1

Chief Joshua Dax Zeno wants to check the charred filing cabinets. We started with eighty files, but after the fire, some were completely destroyed, leaving only a few clean ones behind.

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

Diagram showing the arrangement of 16 boxes in two rows. The top row has 16 boxes, with the 8th and 13th boxes highlighted in orange and labeled 'T'. The bottom row has 12 boxes. Below each box is a number.

Top row numbers: 8342, 4738, 7464, 8876, 2056, 6889, 2836, 1626, 8342, 2836, 8964, 7464, 5725, 6889, 8964, 8342, 2914, 5725, 7464.

Bottom row numbers: 2056, 7542, 1626, 8141, 7464, 2492, 8141, 2056, 2492, 5019, 7464, 8141.

$$9392 - 1050 = \boxed{} \rightarrow \boxed{\text{T}}$$

$$11671 - 4207 = \boxed{} \rightarrow \boxed{\text{E}}$$

$$8315 - 1426 = \boxed{} \rightarrow \boxed{\text{N}}$$

$$2193 - 137 = \boxed{} \rightarrow \boxed{\text{A}}$$

$11616 - 2740 = \boxed{} \rightarrow \boxed{\text{B}}$

$$5681 - 662 = \boxed{} \rightarrow \boxed{\text{K}}$$

$$6387 - 4761 = \boxed{} \rightarrow \boxed{\text{I}}$$

$$10656 - 2515 = \boxed{} \rightarrow \boxed{\text{R}}$$

$$6685 - 3849 = \boxed{} \rightarrow \boxed{\text{D}}$$

$$5865 - 140 = \boxed{} \rightarrow \boxed{\text{S}}$$

$$12681 - 3717 = \boxed{} \rightarrow \boxed{0}$$

$$4740 - 1826 = \boxed{} \rightarrow \boxed{\text{U}}$$

$7560 - 18 = \boxed{} \rightarrow \boxed{\text{F}}$

$$8121 - 3383 = \boxed{} \rightarrow \boxed{\text{H}}$$

$$4697 - 2205 = \boxed{} \rightarrow \boxed{\text{C}}$$

Scratch space:

CLUE 2 Addition

Officer Ben is gathering salvaged gear from the burnt offices. We need to add the working flashlights from the lobby to the ones recovered from the garage to get a total count.

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

T 4774	3965	9554	3381	5983	T 5983	4774	5983	8604	T 4774	3965	9554	5246	8646	4519	4519	5246	8646	3381	
3243	2234	5983	5360	8646	4519	9554	3243	T 4774	3965	8646	8604	2725							

$2625 + 2149 = \square \rightarrow \text{T}$

$1372 + 862 = \square \rightarrow \text{R}$

$3217 + 2766 = \square \rightarrow \text{O}$

$5252 + 4302 = \square \rightarrow \text{E}$

$3322 + 2038 = \square \rightarrow \text{M}$

$2129 + 1114 = \square \rightarrow \text{F}$

$4375 + 4271 = \square \rightarrow \text{A}$

$2274 + 1107 = \square \rightarrow \text{S}$

$1124 + 1601 = \square \rightarrow \text{D}$

$3024 + 1495 = \square \rightarrow \text{L}$

$1990 + 3256 = \square \rightarrow \text{W}$

$2507 + 1458 = \square \rightarrow \text{H}$

$2589 + 6015 = \square \rightarrow \text{N}$

Scratch space:

CLUE 3
Multiplication facts (1-12)

The forensic team is setting up evidence boxes in grid rows. We have several rows with the same number of boxes in each, and multiplying them will give us the total evidence count.

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

T										T									
55	30	49	99	88	99	120	49	96	55	44	40	33	40	64	40	5			
121	44	9	80	40	99	120	44	56	33	32	12	49	44						

$5 \times 11 = \square \rightarrow \boxed{\text{T}}$

$2 \times 6 = \square \rightarrow \boxed{\text{L}}$

$7 \times 7 = \square \rightarrow \boxed{\text{E}}$

$10 \times 3 = \square \rightarrow \boxed{\text{H}}$

$11 \times 11 = \square \rightarrow \boxed{\text{F}}$

$8 \times 7 = \square \rightarrow \boxed{\text{I}}$

$8 \times 10 = \square \rightarrow \boxed{\text{M}}$

$3 \times 11 = \square \rightarrow \boxed{\text{N}}$

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

$5 \times 1 = \square \rightarrow \boxed{\text{Y}}$

$4 \times 10 = \square \rightarrow \boxed{\text{A}}$

$4 \times 11 = \square \rightarrow \boxed{\text{R}}$

$9 \times 1 = \square \rightarrow \boxed{\text{O}}$

$8 \times 8 = \square \rightarrow \boxed{\text{W}}$

$8 \times 12 = \square \rightarrow \boxed{\text{C}}$

$11 \times 8 = \square \rightarrow \boxed{\text{U}}$

$8 \times 4 = \square \rightarrow \boxed{\text{K}}$

$12 \times 10 = \square \rightarrow \boxed{\text{P}}$

Scratch space:

CLUE 4
Fractions of a number

Out of all the badges salvaged from the chief's desk, a fraction of them still have readable serial numbers, which will help us unlock the next clue.

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

A											A		
24	7	13	29	20	40	12	13	19	22	40	24	29	13
2	36	29	17	17	19	22	38	3	12	40	19	37	29

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

$1/5 \text{ of } 85 = \square \rightarrow \text{P}$

$2/6 \text{ of } 60 = \square \rightarrow \text{G}$

$6/10 \text{ of } 5 = \square \rightarrow \text{N}$

$2/6 \text{ of } 6 = \square \rightarrow \text{C}$

$2/8 \text{ of } 76 = \square \rightarrow \text{E}$

$2/3 \text{ of } 57 = \square \rightarrow \text{O}$

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

$2/8 \text{ of } 88 = \square \rightarrow \text{D}$

$2/6 \text{ of } 39 = \square \rightarrow \text{R}$

$5/10 \text{ of } 80 = \square \rightarrow \text{H}$

$5/10 \text{ of } 58 = \square \rightarrow \text{I}$

$1/4 \text{ of } 48 = \square \rightarrow \text{T}$

$1/6 \text{ of } 42 = \square \rightarrow \text{B}$

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

Scratch space:

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

Only a small fraction of the station's outdoor security cameras survived the heat, and analyzing their footage will reveal the final piece of the puzzle.

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:

$4/8 \text{ of } 10 = \boxed{}$

$2/6 \text{ of } 9 = \boxed{}$

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

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

$4/8 \text{ of } 14 = \boxed{}$

$1/5 \text{ of } 45 = \boxed{}$

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

$1/5 \text{ of } 60 = \boxed{}$

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

$2/6 \text{ of } 12 = \boxed{}$

$1/3 \text{ of } 24 = \boxed{}$

Step 2 - cross out the sentence with each answer:

1. The villain sprays a giant water blaster, then sparks a flint tool.
2. The villain flies a sneaky pocket drone, then sparks a flint tool.
3. The villain drops a thick smoke bomb, then charges up a solar battery.
4. The villain zooms away on speed skates, then clicks a mini gas lighter.
5. The villain flies a sneaky pocket drone, then focuses a magnifying glass.
6. The villain zooms away on speed skates, then charges up a solar battery.
7. The villain zooms away on speed skates, then focuses a magnifying glass.
8. The villain flies a sneaky pocket drone, then charges up a solar battery.
9. The villain drops a thick smoke bomb, then tosses a loud fire cracker.
10. The villain zooms away on speed skates, then sparks a flint tool.
11. The villain shines a blinding laser pointer, then focuses a magnifying glass.
12. The villain sprays a giant water blaster, then clicks a mini gas lighter.

Answer Key

The Junior Police Station Mystery

Culprit: Deputy Mia

speed skates · flint sparker · left handed · bright red hair · fear of water

Trail: Start 21 → Clue 1 18 → Clue 2 9 → Clue 3 5 → Clue 4 4 → Clue 5 1

Clue 1 (Subtraction): "THE BANDIT DOES NOT USE A FIRE CRACKER"

9392 - 1050 = 8342 (T) · 11671 - 4207 = 7464 (E) · 8315 - 1426 = 6889 (N) · 2193 - 137 = 2056 (A) · 11616 - 2740 = 8876 (B) · 5681 - 662 = 5019 (K) · 6387 - 4761 = 1626 (I) · 10656 - 2515 = 8141 (R) · 6685 - 3849 = 2836 (D) · 5865 - 140 = 5725 (S) · 12681 - 3717 = 8964 (O) · 4740 - 1826 = 2914 (U) · 7560 - 18 = 7542 (F) · 8121 - 3383 = 4738 (H) · 4697 - 2205 = 2492 (C)

Clue 2 (Addition): "THE SOOT ON THE WALL WAS FROM A LEFT HAND"

2625 + 2149 = 4774 (T) · 1372 + 862 = 2234 (R) · 3217 + 2766 = 5983 (O) · 5252 + 4302 = 9554 (E) · 3322 + 2038 = 5360 (M) · 2129 + 1114 = 3243 (F) · 4375 + 4271 = 8646 (A) · 2274 + 1107 = 3381 (S) · 1124 + 1601 = 2725 (D) · 3024 + 1495 = 4519 (L) · 1990 + 3256 = 5246 (W) · 2507 + 1458 = 3965 (H) · 2589 + 6015 = 8604 (N)

Clue 3 (Multiplication facts (1-12)): "THE SUSPECT RAN AWAY FROM A SPRINKLER"

5 × 11 = 55 (T) · 2 × 6 = 12 (L) · 7 × 7 = 49 (E) · 10 × 3 = 30 (H) · 11 × 11 = 121 (F) · 8 × 7 = 56 (I) · 8 × 10 = 80 (M) · 3 × 11 = 33 (N) · 11 × 9 = 99 (S) · 5 × 1 = 5 (Y) · 4 × 10 = 40 (A) · 4 × 11 = 44 (R) · 9 × 1 = 9 (O) · 8 × 8 = 64 (W) · 8 × 12 = 96 (C) · 11 × 8 = 88 (U) · 8 × 4 = 32 (K) · 12 × 10 = 120 (P)

Clue 4 (Fractions of a number): "A BRIGHT RED HAIR CLIPPED ON THE WIRE"

1/5 of 120 = 24 (A) · 1/5 of 85 = 17 (P) · 2/6 of 60 = 20 (G) · 6/10 of 5 = 3 (N) · 2/6 of 6 = 2 (C) · 2/8 of 76 = 19 (E) · 2/3 of 57 = 38 (O) · 3/4 of 48 = 36 (L) · 2/8 of 88 = 22 (D) · 2/6 of 39 = 13 (R) · 5/10 of 80 = 40 (H) · 5/10 of 58 = 29 (I) · 1/4 of 48 = 12 (T) · 1/6 of 42 = 7 (B) · 1/4 of 148 = 37 (W)

Clue 5 (Fractions of a number): surviving statement is box 10 → Deputy Mia

4/8 of 10 = 5 · 2/6 of 9 = 3 · 2/10 of 10 = 2 · 2/4 of 2 = 1 · 4/8 of 14 = 7 · 1/5 of 45 = 9 · 1/10 of 110 = 11 · 1/5 of 60 = 12 · 6/8 of 8 = 6 · 2/6 of 12 = 4 · 1/3 of 24 = 8