



The Mystery of the Missing Medals

Grade 4 math · Multiplication, Rounding, Addition, Subtraction, Division · Reading level grades 3-4

Detective: _____ **Date:** _____

The grand finale of the National Gymnastics Cup is about to start! But oh no! Someone broke into the gear room and swapped the real medals with chocolate ones. The Head Coach needs your help to find the sneaky Gymnastics Glitcher before the awards ceremony begins!

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 Gymnastics Glitcher is _____

Possible suspects

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

NAME	SIGNATURE MOVE	LUCKY GEAR	GRIP TAPE PREFERENCE	HAIR STYLE	CLUMSY HABIT
Nile	triple twisting Yurchenko	neon pink wristbands	chalky left hand print	tight braided bun	drops the sticky spray bottle
Kohei	stuck Tsukahara vault	golden chalk bucket	chalky right hand print	curly high puff	trips on the foam pit edge
Dominique	flawless pommel horse travel	golden chalk bucket	chalky right hand print	curly high puff	drops the sticky spray bottle
Max	double layout flyaway	custom leather hand grips	chalky right hand print	tight braided bun	trips on the foam pit edge
Konnor	flawless pommel horse travel	neon pink wristbands	chalky right hand print	curly high puff	drops the sticky spray bottle
Yul	double layout flyaway	lucky rainbow hair ribbon	chalky right hand print	curly high puff	trips on the foam pit edge
Shannon	double layout flyaway	neon pink wristbands	chalky right hand print	curly high puff	trips on the foam pit edge
Kayla	stuck Tsukahara vault	custom leather hand grips	chalky left hand print	tight braided bun	sneezes from the loose chalk
Nadia	double layout flyaway	sparkly star leotard	chalky left hand print	curly high puff	sneezes from the loose chalk
Shilese	perfect giant swing	custom leather hand grips	chalky left hand print	curly high puff	trips on the foam pit edge
Jordan	flawless pommel horse travel	sparkly star leotard	chalky right hand print	curly high puff	trips on the foam pit edge
Shawn	triple twisting Yurchenko	golden chalk bucket	chalky right hand print	slicked back ponytail	sneezes from the loose chalk
Laurie	triple twisting Yurchenko	neon pink wristbands	chalky right hand print	slicked back ponytail	trips on the foam pit edge
Leanne	flawless pommel horse travel	golden chalk bucket	chalky left hand print	tight braided bun	sneezes from the loose chalk
Brody	flawless pommel horse travel	custom leather hand grips	chalky right hand print	curly high puff	sneezes from the loose chalk
Aly	double layout flyaway	neon pink wristbands	chalky left hand print	slicked back ponytail	drops the sticky spray bottle
Fred	triple twisting Yurchenko	custom leather hand grips	chalky right hand print	slicked back ponytail	sneezes from the loose chalk
Asher	perfect giant swing	custom leather hand grips	chalky left hand print	curly high puff	drops the sticky spray bottle
Nastia	perfect giant swing	lucky rainbow hair ribbon	chalky right hand print	slicked back ponytail	sneezes from the loose chalk
Skye	double layout flyaway	lucky rainbow hair ribbon	chalky right hand print	tight braided bun	drops the sticky spray bottle
Suni	double layout flyaway	custom leather hand grips	chalky right hand print	curly high puff	trips on the foam pit edge

CLUE 1
Multiplication facts (1-12)

The coach counts the stacks of leotards. There are several neat rows with the same number of leotards in each row. Let us multiply to find the total and unlock a clue.

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

T																T	
16	6	3	42	55	80	80	3	42	2	55	3	60	144	55	16		
50	3	90	42	132	49	144	81	50	42	49	60	16	80	90	144	2	60

$4 \times 4 = \square \rightarrow$ T	$8 \times 10 = \square \rightarrow$ B	$12 \times 11 = \square \rightarrow$ P
$2 \times 1 = \square \rightarrow$ D	$5 \times 11 = \square \rightarrow$ O	$7 \times 6 = \square \rightarrow$ R
$9 \times 10 = \square \rightarrow$ A	$9 \times 9 = \square \rightarrow$ K	$10 \times 5 = \square \rightarrow$ W
$12 \times 12 = \square \rightarrow$ N	$6 \times 10 = \square \rightarrow$ S	$2 \times 3 = \square \rightarrow$ H
$3 \times 1 = \square \rightarrow$ E	$7 \times 7 = \square \rightarrow$ I	

Scratch space:

CLUE 2 Rounding

The scoreboard has a glitch! It only displays the gymnast scores rounded to the nearest ten. Round the numbers to fix the screen and see the next clue.

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

A							A					A		
200	300	700	230	1300	2000	1300	200	3700	900	170	1300	200	4300	1100
							A						A	
9000	300	700	3700	2000	30	200	5000	500	3700	2000	1300	90	430	200
														300

Round 185 to the nearest hundred → **A**

Round 9,061 to the nearest thousand → **P**

Round 869 to the nearest hundred → **D**

Round 328 to the nearest hundred → **R**

Round 528 to the nearest hundred → **O**

Round 434 to the nearest ten → **B**

Round 169 to the nearest ten → **C**

Round 5,261 to the nearest thousand → **S**

Round 1,323 to the nearest hundred → **H**

Round 3,689 to the nearest hundred → **N**

Round 91 to the nearest ten → **E**

Round 229 to the nearest ten → **G**

Round 1,090 to the nearest hundred → **K**

Round 1,840 to the nearest thousand → **T**

Round 673 to the nearest hundred → **I**

Round 29 to the nearest ten → **W**

Round 4,333 to the nearest hundred → **L**

Scratch space:

CLUE 3 Addition

We need to tally up all the foam blocks in the training pit. Add the green blocks and the blue blocks together to clear the way for this clue.

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

T 7748	2216	6011	6958	9251	6958	9795	6011	2239	T 7748	T 7748	8265	5090	9795	9795	6011	8602	3296	4803
T 7748	2216	6011	7663	9629	5443	4103	9795	5090	T 7748									

$3756 + 3992 = \square \rightarrow \text{T}$	$4454 + 5175 = \square \rightarrow \text{O}$	$3005 + 3006 = \square \rightarrow \text{E}$
$2334 + 5329 = \square \rightarrow \text{F}$	$5242 + 4553 = \square \rightarrow \text{P}$	$4862 + 2096 = \square \rightarrow \text{S}$
$5501 + 3750 = \square \rightarrow \text{U}$	$3545 + 4720 = \square \rightarrow \text{R}$	$819 + 1420 = \square \rightarrow \text{C}$
$2368 + 2722 = \square \rightarrow \text{I}$	$2282 + 2521 = \square \rightarrow \text{Y}$	$2750 + 1353 = \square \rightarrow \text{M}$
$3005 + 2438 = \square \rightarrow \text{A}$	$4243 + 4359 = \square \rightarrow \text{D}$	$907 + 1309 = \square \rightarrow \text{H}$
$1119 + 2177 = \square \rightarrow \text{B}$		

Scratch space:

CLUE 4 Subtraction

Some grip bags went missing from the team bench. Subtract the stolen bags from the starting total to find how many are left and uncover this clue.

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

W																	
6144	3675	1216	6742	6987	7748	8486	7697	4924	6987	1251	5900	6051	8504	7697	3035	1251	6742 7748

1684	8504	3675	7132	3675	7697 6427

$9602 - 3458 = \square \rightarrow \text{W}$	$8337 - 3413 = \square \rightarrow \text{C}$	$8126 - 4451 = \square \rightarrow \text{E}$
$8164 - 416 = \square \rightarrow \text{N}$	$10331 - 3904 = \square \rightarrow \text{M}$	$8790 - 2739 = \square \rightarrow \text{Y}$
$10352 - 3365 = \square \rightarrow \text{U}$	$11286 - 4154 = \square \rightarrow \text{B}$	$9434 - 3534 = \square \rightarrow \text{L}$
$1285 - 69 = \square \rightarrow \text{F}$	$9003 - 517 = \square \rightarrow \text{D}$	$9036 - 1339 = \square \rightarrow \text{A}$
$3203 - 1519 = \square \rightarrow \text{T}$	$7797 - 4762 = \square \rightarrow \text{I}$	$7422 - 680 = \square \rightarrow \text{O}$
$12367 - 3863 = \square \rightarrow \text{H}$	$5951 - 4700 = \square \rightarrow \text{R}$	

Scratch space:

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

The team wants to share a big bag of hair ribbons. Divide the ribbons equally among the active gymnasts to solve this 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:

$20 \div 5 = \boxed{}$

$35 \div 7 = \boxed{}$

$6 \div 1 = \boxed{}$

$99 \div 11 = \boxed{}$

$24 \div 12 = \boxed{}$

$18 \div 6 = \boxed{}$

$120 \div 10 = \boxed{}$

$21 \div 3 = \boxed{}$

$1 \div 1 = \boxed{}$

$32 \div 4 = \boxed{}$

$50 \div 5 = \boxed{}$

Step 2 - cross out the sentence with each answer:

1. The villain swings smoothly on the uneven bars, then takes the custom chalk tub.
2. The villain vaults clean over the judge table, then pockets the gold medals.
3. The villain does a giant swing over the vault, then pockets the gold medals.
4. The villain vaults clean over the judge table, then steals the team music player.
5. The villain swings smoothly on the uneven bars, then snatches the golden trophy.
6. The villain does a giant swing over the vault, then takes the custom chalk tub.
7. The villain leaps across the balance beam, then grabs the lucky mascot.
8. The villain swings smoothly on the uneven bars, then pockets the gold medals.
9. The villain performs a double layout on floor, then steals the team music player.
10. The villain swings smoothly on the uneven bars, then steals the team music player.
11. The villain does a giant swing over the vault, then grabs the lucky mascot.
12. The villain performs a double layout on floor, then snatches the golden trophy.

Answer Key

The Mystery of the Missing Medals

Culprit: Suni

double layout flyaway · custom leather hand grips · chalky right hand print · curly high puff · trips on the foam pit edge

Trail: Start 21 → Clue 1 16 → Clue 2 11 → Clue 3 5 → Clue 4 4 → Clue 5 1

Clue 1 (Multiplication facts (1-12)): "THE ROBBER DOES NOT WEAR PINK WRISTBANDS"

$4 \times 4 = 16$ (T) · $8 \times 10 = 80$ (B) · $12 \times 11 = 132$ (P) · $2 \times 1 = 2$ (D) · $5 \times 11 = 55$ (O) · $7 \times 6 = 42$ (R) · $9 \times 10 = 90$ (A) · $9 \times 9 = 81$ (K) · $10 \times 5 = 50$ (W) · $12 \times 12 = 144$ (N) · $6 \times 10 = 60$ (S) · $2 \times 3 = 6$ (H) · $3 \times 1 = 3$ (E) · $7 \times 7 = 49$ (I)

Clue 2 (Rounding): "A RIGHT HAND CHALK PRINT WAS ON THE BAR"

Round 185 to the nearest hundred = 200 (A) · Round 9,061 to the nearest thousand = 9000 (P) · Round 869 to the nearest hundred = 900 (D) · Round 328 to the nearest hundred = 300 (R) · Round 528 to the nearest hundred = 500 (O) · Round 434 to the nearest ten = 430 (B) · Round 169 to the nearest ten = 170 (C) · Round 5,261 to the nearest thousand = 5000 (S) · Round 1,323 to the nearest hundred = 1300 (H) · Round 3,689 to the nearest hundred = 3700 (N) · Round 91 to the nearest ten = 90 (E) · Round 229 to the nearest ten = 230 (G) · Round 1,090 to the nearest hundred = 1100 (K) · Round 1,840 to the nearest thousand = 2000 (T) · Round 673 to the nearest hundred = 700 (I) · Round 29 to the nearest ten = 30 (W) · Round 4,333 to the nearest hundred = 4300 (L)

Clue 3 (Addition): "THE SUSPECT TRIPPED BY THE FOAM PIT"

$3756 + 3992 = 7748$ (T) · $4454 + 5175 = 9629$ (O) · $3005 + 3006 = 6011$ (E) · $2334 + 5329 = 7663$ (F) · $5242 + 4553 = 9795$ (P) · $4862 + 2096 = 6958$ (S) · $5501 + 3750 = 9251$ (U) · $3545 + 4720 = 8265$ (R) · $819 + 1420 = 2239$ (C) · $2368 + 2722 = 5090$ (I) · $2282 + 2521 = 4803$ (Y) · $2750 + 1353 = 4103$ (M) · $3005 + 2438 = 5443$ (A) · $4243 + 4359 = 8602$ (D) · $907 + 1309 = 2216$ (H) · $1119 + 2177 = 3296$ (B)

Clue 4 (Subtraction): "WE FOUND A CURLY HAIR ON THE BEAM"

$9602 - 3458 = 6144$ (W) · $8337 - 3413 = 4924$ (C) · $8126 - 4451 = 3675$ (E) · $8164 - 416 = 7748$ (N) · $10331 - 3904 = 6427$ (M) · $8790 - 2739 = 6051$ (Y) · $10352 - 3365 = 6987$ (U) · $11286 - 4154 = 7132$ (B) · $9434 - 3534 = 5900$ (L) · $1285 - 69 = 1216$ (F) · $9003 - 517 = 8486$ (D) · $9036 - 1339 = 7697$ (A) · $3203 - 1519 = 1684$ (T) · $7797 - 4762 = 3035$ (I) · $7422 - 680 = 6742$ (O) · $12367 - 3863 = 8504$ (H) · $5951 - 4700 = 1251$ (R)

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

$20 \div 5 = 4$ · $35 \div 7 = 5$ · $6 \div 1 = 6$ · $99 \div 11 = 9$ · $24 \div 12 = 2$ · $18 \div 6 = 3$ · $120 \div 10 = 12$ · $21 \div 3 = 7$ · $1 \div 1 = 1$ · $32 \div 4 = 8$ · $50 \div 5 = 10$