



The Golden Trophy Tumble

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

Detective: _____ **Date:** _____

The grand opening of the new gym was going great. Suddenly, the lights went out. When they came back on, the shiny Golden Trophy was gone! The Rogue Gymnast took it. You must help the Head Coach find the culprit by solving the clues.

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 The Rogue Gymnast 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	GYM GEAR	DOMINANT HAND	HAIR ACCESSORY	OBSTACLE OVERCOME
Simone B	uneven bar spin	pommel horse dash	left handed grip	sparkly gold bow	slippery floor mat
Konnor M	uneven bar spin	chalk storm	right handed grip	sparkly gold bow	unbalanced beam
Shannon M	trampoline bounce	chalk storm	right handed grip	sparkly gold bow	slippery floor mat
Gabby D	vault blast	springboard leap	left handed grip	sparkly gold bow	slippery floor mat
Coach Dave	beam balance	chalk storm	right handed grip	bright blue headband	slippery floor mat
Jordan C	vault blast	hoop shield	left handed grip	sparkly gold bow	slippery floor mat
Laurie H	uneven bar spin	pommel horse dash	right handed grip	sparkly gold bow	unbalanced beam
Nastia L	trampoline bounce	springboard leap	left handed grip	neon pink scrunchie	slippery floor mat
Nadia C	vault blast	chalk storm	left handed grip	neon pink scrunchie	slippery floor mat
Dominique M	floor music shockwave	pommel horse dash	right handed grip	neon pink scrunchie	heavy grip bag
Mary Lou	floor music shockwave	hoop shield	right handed grip	sparkly gold bow	heavy grip bag
Leanne W	beam balance	hoop shield	left handed grip	bright blue headband	unbalanced beam
Shawn J	trampoline bounce	ribbon tangle	left handed grip	bright blue headband	heavy grip bag
Carly P	vault blast	pommel horse dash	right handed grip	sparkly gold bow	slippery floor mat
Jade C	vault blast	pommel horse dash	left handed grip	neon pink scrunchie	unbalanced beam
Madison K	beam balance	ribbon tangle	right handed grip	bright blue headband	unbalanced beam
Trish G	trampoline bounce	chalk storm	left handed grip	sparkly gold bow	slippery floor mat
Becca S	beam balance	hoop shield	left handed grip	sparkly gold bow	slippery floor mat
Kyla C	trampoline bounce	hoop shield	left handed grip	bright blue headband	unbalanced beam
Coach Sarah	beam balance	ribbon tangle	left handed grip	sparkly gold bow	slippery floor mat
Skye B	beam balance	pommel horse dash	left handed grip	sparkly gold bow	unbalanced beam

CLUE 1 Multiplication facts (1-12)

To find the first clue, count the rows of medals on the wall. The gym has several rows with equal numbers of gold medals. Multiply them to find the total and unlock the clue.

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

A 2x10 grid of boxes. The top row contains the following sequence: an orange box with 'T', three white boxes, a white box, a white box, a white box, a white box, a white box, an orange box with 'T', four white boxes, two white boxes, and an orange box with 'T'. The bottom row contains the following sequence: three white boxes, a white box, a white box, a white box, a white box, a white box, four white boxes, a white box, a white box, a white box, a white box, and a white box. Below each box is a number.

T							T								T	
99	9	21	55	120	55	42	21	84	99	14	7	21	55	64	7	99
120	55	21	5	9	7	7	42	55	9	63	21	33	14			

$$9 \times 11 = \boxed{} \rightarrow \boxed{\text{T}}$$

$1 \times 5 = \boxed{} \rightarrow \boxed{\mathbf{A}}$

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

$$8 \times 8 = \boxed{} \rightarrow \boxed{\text{N}}$$

$11 \times 5 = \boxed{} \rightarrow \mathbf{S}$

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

$2 \times 7 = \square \rightarrow \mathbf{D}$

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

$7 \times 12 = \boxed{} \rightarrow \boxed{\text{C}}$

$9 \times 7 = \boxed{} \rightarrow \boxed{} \mid$

$11 \times 3 = \boxed{} \rightarrow \boxed{\text{L}}$

$1 \times 7 = \boxed{} \rightarrow \boxed{0}$

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

Scratch space:

CLUE 2

The digital timer got damaged during the heist. The screen is cracked and only shows numbers rounded to the nearest ten. Round the scoreboard number to read the secret code.

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

500 230 50 200 1100 110 110 1700 1100 370 700 90 50 90 1700 110 50 430 500

230 1700 370 2900 50 2900 70 30 1100 900

Round 502 to the nearest hundred $\rightarrow$ **T**

Round 110 to the nearest ten $\rightarrow$ **L**

Round 434 to the nearest ten $\rightarrow$ **F**

Round 33 to the nearest ten $\rightarrow$ **R**

Round 66 to the nearest ten → **G**

Round 680 to the nearest hundred $\rightarrow$ **U**

Round 366 to the nearest ten $\rightarrow$ **N**

Round 1,651 to the nearest hundred → **A**

Round 154 to the nearest hundred $\rightarrow$ **V**

Round 1,104 to the nearest hundred $\rightarrow$

Round 49 to the nearest ten $\rightarrow$ **E**

Round 234 to the nearest ten $\rightarrow$ **H**

Round 2,899 to the nearest hundred $\rightarrow$ **D**

Round 88 to the nearest ten $\rightarrow$ **S**

Round 947 to the nearest hundred $\rightarrow$ **P**

Scratch space:

CLUE 3 Addition

The team needs to count all the chalk blocks left in the storage bins. Add the supplies from the vault area and the bars area together to find the total and reveal a clue.

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

T														
7788	5717	3002	3763	6450	6129	9074	4520	4520	3002	7721	7318	6242	6024	

														T	
6450	6129	9074	4520	4520	3002	6332	3763	5677	6129	7318	7318	6332	5541	6024	7788

$4526 + 3262 = \square \rightarrow \text{[T]}$	$2228 + 2292 = \square \rightarrow \text{[P]}$	$1309 + 1693 = \square \rightarrow \text{[E]}$
$3870 + 2154 = \square \rightarrow \text{[A]}$	$4852 + 2466 = \square \rightarrow \text{[O]}$	$1836 + 1927 = \square \rightarrow \text{[Y]}$
$2247 + 3995 = \square \rightarrow \text{[N]}$	$5210 + 3864 = \square \rightarrow \text{[I]}$	$2577 + 3140 = \square \rightarrow \text{[H]}$
$3010 + 2667 = \square \rightarrow \text{[F]}$	$3264 + 3186 = \square \rightarrow \text{[S]}$	$2696 + 2845 = \square \rightarrow \text{[M]}$
$3351 + 2778 = \square \rightarrow \text{[L]}$	$3054 + 3278 = \square \rightarrow \text{[R]}$	$4263 + 3458 = \square \rightarrow \text{[D]}$

Scratch space:

CLUE 4

Subtraction

We found two boxes of hair scrunchies spilled on the gym floor. Subtract the number of scrunchies still in the box from the original total to see how many are missing.

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

W																			
4768	5028	5158	7850	3705	8009	4051	7693	4507	4123	7693	3023	4808	3557	3205	8631	7850	3557	4051	

		W
7073	7850	4768

$6693 - 1925 = \square \rightarrow \boxed{\text{W}}$

$5643 - 1520 = \square \rightarrow \boxed{\text{P}}$

$12493 - 4643 = \square \rightarrow \boxed{\text{O}}$

$6054 - 2349 = \square \rightarrow \boxed{\text{U}}$

$3650 - 627 = \square \rightarrow \boxed{\text{R}}$

$7840 - 767 = \square \rightarrow \boxed{\text{B}}$

$9939 - 4911 = \square \rightarrow \boxed{\text{E}}$

$7145 - 1987 = \square \rightarrow \boxed{\text{F}}$

$6654 - 2603 = \square \rightarrow \boxed{\text{D}}$

$8069 - 4864 = \square \rightarrow \boxed{\text{Y}}$

$8800 - 1107 = \square \rightarrow \boxed{\text{A}}$

$11752 - 3121 = \square \rightarrow \boxed{\text{G}}$

$8301 - 3493 = \square \rightarrow \boxed{\text{K}}$

$4536 - 29 = \square \rightarrow \boxed{\text{S}}$

$8239 - 230 = \square \rightarrow \boxed{\text{N}}$

$4381 - 824 = \square \rightarrow \boxed{\text{L}}$

Scratch space:

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

Coach wants to share the remaining energy bars equally among the junior gymnasts. Divide the total snacks by the number of team members to see how many each person gets.

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:

$33 \div 11 = \boxed{}$

$144 \div 12 = \boxed{}$

$24 \div 3 = \boxed{}$

$70 \div 10 = \boxed{}$

$20 \div 4 = \boxed{}$

$99 \div 11 = \boxed{}$

$120 \div 12 = \boxed{}$

$42 \div 7 = \boxed{}$

$1 \div 1 = \boxed{}$

$36 \div 9 = \boxed{}$

$24 \div 12 = \boxed{}$

Step 2 - cross out the sentence with each answer:

1. The villain unleashes a loud floor music shockwave, then blinds the room with a chalk storm.
2. The villain whips up a wind with an uneven bar spin, then blocks the exit with a hoop shield.
3. The villain jumps high with a trampoline bounce, then blinds the room with a chalk storm.
4. The villain uses a powerful vault blast, then runs away with a fast pommel horse dash.
5. The villain unleashes a loud floor music shockwave, then escapes using a messy ribbon tangle.
6. The villain jumps high with a trampoline bounce, then blocks the exit with a hoop shield.
7. The villain whips up a wind with an uneven bar spin, then blinds the room with a chalk storm.
8. The villain creates an icy beam balance path, then escapes using a messy ribbon tangle.
9. The villain jumps high with a trampoline bounce, then runs away with a fast pommel horse dash.
10. The villain whips up a wind with an uneven bar spin, then escapes using a messy ribbon tangle.
11. The villain uses a powerful vault blast, then soars over the fence with a springboard leap.
12. The villain whips up a wind with an uneven bar spin, then runs away with a fast pommel horse dash.

Answer Key

The Golden Trophy Tumble

Culprit: Gabby D

vault blast · springboard leap · left handed grip · sparkly gold bow · slippery floor mat

Trail: Start 21 → Clue 1 16 → Clue 2 9 → Clue 3 6 → Clue 4 4 → Clue 5 1

Clue 1 (Multiplication facts (1-12)): "THE SUSPECT DOES NOT USE A HOOP SHIELD"

$9 \times 11 = 99$ (T) · $1 \times 5 = 5$ (A) · $7 \times 3 = 21$ (E) · $8 \times 8 = 64$ (N) · $11 \times 5 = 55$ (S) · $7 \times 6 = 42$ (P) · $2 \times 7 = 14$ (D) · $10 \times 12 = 120$ (U) · $7 \times 12 = 84$ (C) · $9 \times 7 = 63$ (I) · $11 \times 3 = 33$ (L) · $1 \times 7 = 7$ (O) · $1 \times 9 = 9$ (H)

Clue 2 (Rounding): "THE VILLAIN USES A LEFT HANDED GRIP"

Round 502 to the nearest hundred = 500 (T) · Round 110 to the nearest ten = 110 (L) · Round 434 to the nearest ten = 430 (F) · Round 33 to the nearest ten = 30 (R) · Round 66 to the nearest ten = 70 (G) · Round 680 to the nearest hundred = 700 (U) · Round 366 to the nearest ten = 370 (N) · Round 1,651 to the nearest hundred = 1700 (A) · Round 154 to the nearest hundred = 200 (V) · Round 1,104 to the nearest hundred = 1100 (I) · Round 49 to the nearest ten = 50 (E) · Round 234 to the nearest ten = 230 (H) · Round 2,899 to the nearest hundred = 2900 (D) · Round 88 to the nearest ten = 90 (S) · Round 947 to the nearest hundred = 900 (P)

Clue 3 (Addition): "THEY SLIPPED ON A SLIPPERY FLOOR MAT"

$4526 + 3262 = 7788$ (T) · $2228 + 2292 = 4520$ (P) · $1309 + 1693 = 3002$ (E) · $3870 + 2154 = 6024$ (A) · $4852 + 2466 = 7318$ (O) · $1836 + 1927 = 3763$ (Y) · $2247 + 3995 = 6242$ (N) · $5210 + 3864 = 9074$ (I) · $2577 + 3140 = 5717$ (H) · $3010 + 2667 = 5677$ (F) · $3264 + 3186 = 6450$ (S) · $2696 + 2845 = 5541$ (M) · $3351 + 2778 = 6129$ (L) · $3054 + 3278 = 6332$ (R) · $4263 + 3458 = 7721$ (D)

Clue 4 (Subtraction): "WE FOUND A SPARKLY GOLD BOW"

$6693 - 1925 = 4768$ (W) · $5643 - 1520 = 4123$ (P) · $12493 - 4643 = 7850$ (O) · $6054 - 2349 = 3705$ (U) · $3650 - 627 = 3023$ (R) · $7840 - 767 = 7073$ (B) · $9939 - 4911 = 5028$ (E) · $7145 - 1987 = 5158$ (F) · $6654 - 2603 = 4051$ (D) · $8069 - 4864 = 3205$ (Y) · $8800 - 1107 = 7693$ (A) · $11752 - 3121 = 8631$ (G) · $8301 - 3493 = 4808$ (K) · $4536 - 29 = 4507$ (S) · $8239 - 230 = 8009$ (N) · $4381 - 824 = 3557$ (L)

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

$33 \div 11 = 3$ · $144 \div 12 = 12$ · $24 \div 3 = 8$ · $70 \div 10 = 7$ · $20 \div 4 = 5$ · $99 \div 11 = 9$ · $120 \div 12 = 10$ · $42 \div 7 = 6$ · $1 \div 1 = 1$ · $36 \div 9 = 4$ · $24 \div 12 = 2$