



The Mystery of the Missing Golden Button

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

Detective: _____ Date: _____

Oh no! The shiny Golden Play Button has disappeared from the wall of the Shiloh and Bros studio right before the big stream! An Imposter is among us in the house, hiding with the loot. It's up to you to help Shiloh and the crew use their gaming skills, solve the math puzzles, and unmask the culprit!

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 Imposter is _____

Possible suspects

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

NAME	CLASS	GAMING GEAR	GRIP	HAIR STYLE	VULNERABILITY
Beck	Speedrunner	Golden Apple	Plays Left Handed	Brunette	Afraid of Spiders
Micah	Speedrunner	Golden Apple	Plays Left Handed	Neon Blue	Weak to Water Balloons
Shiloh	Crewmate	Golden Apple	Plays Right Handed	Brunette	Afraid of Spiders
Austin	Crewmate	Red Crewmate Hat	Plays Right Handed	Neon Blue	Distracted by Pizza
Taya	Speedrunner	Golden Apple	Plays Right Handed	Blonde	Weak to Water Balloons
Uncle Shaun	Pro Obbyist	Grappling Hook	Plays Right Handed	Brunette	Weak to Water Balloons
Elijah	Crewmate	Golden Apple	Plays Right Handed	Blonde	Weak to Water Balloons
Justin	Pro Obbyist	Glitch Controller	Plays Left Handed	Brunette	Distracted by Pizza
Paige	Speedrunner	Golden Apple	Plays Right Handed	Blonde	Distracted by Pizza
Daniel	Speedrunner	Golden Apple	Plays Right Handed	Blonde	Afraid of Spiders
Chloe	Crewmate	Golden Apple	Plays Left Handed	Blonde	Afraid of Spiders
David	Crewmate	Grappling Hook	Plays Left Handed	Neon Blue	Distracted by Pizza
Judah	Minecraft Builder	Red Crewmate Hat	Plays Right Handed	Brunette	Distracted by Pizza
Sarah	Minecraft Builder	Grappling Hook	Plays Left Handed	Neon Blue	Afraid of Spiders
Britney	Minecraft Builder	Glitch Controller	Plays Right Handed	Brunette	Distracted by Pizza
Connor	Roblox Knight	Golden Apple	Plays Right Handed	Brunette	Distracted by Pizza
Hannah	Speedrunner	Red Crewmate Hat	Plays Left Handed	Brunette	Distracted by Pizza
Mason	Roblox Knight	Grappling Hook	Plays Right Handed	Brunette	Distracted by Pizza
Jordan	Roblox Knight	Grappling Hook	Plays Right Handed	Neon Blue	Weak to Water Balloons
Marcus	Pro Obbyist	Golden Apple	Plays Right Handed	Brunette	Weak to Water Balloons
Tyler	Pro Obbyist	Golden Apple	Plays Right Handed	Brunette	Distracted by Pizza

CLUE 1 Addition

We need to tally up all the foam swords in the studio prop room. Adding these boxes together will reveal our first major clue.

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

T									T					
9387	5471	3284	4638	5037	4638	2130	3284	2891	9387	5471	8280	4638	8503	3268

			T					T						
8191	4122	8589	9387	2891	5471	2891	3268	8503	9387	5314	3268	4122	4122	3284

$$3542 + 5845 = \boxed{} \rightarrow \boxed{\text{T}}$$

$$1636 + 1255 = \boxed{} \rightarrow \boxed{\text{C}}$$

$$1089 + 1041 = \boxed{} \rightarrow \boxed{\text{P}}$$

$$1811 + 1473 = \boxed{} \rightarrow \boxed{\text{E}}$$

$$4005 + 4186 = \boxed{} \rightarrow \boxed{\text{G}}$$

$$3707 + 4882 = \boxed{} \rightarrow \boxed{\text{I}}$$

$$3882 + 4398 = \boxed{} \rightarrow \boxed{\text{A}}$$

$$3600 + 1714 = \boxed{} \rightarrow \boxed{\text{R}}$$

$$1460 + 2662 = \boxed{} \rightarrow \boxed{\text{L}}$$

$$2452 + 2186 = \boxed{} \rightarrow \boxed{\text{S}}$$

$$3159 + 1878 = \boxed{} \rightarrow \boxed{\text{U}}$$

$$2988 + 2483 = \boxed{} \rightarrow \boxed{\text{H}}$$

$$1473 + 1795 = \boxed{} \rightarrow \boxed{\text{O}}$$

$$3266 + 5237 = \boxed{} \rightarrow \boxed{\text{N}}$$

Scratch space:

CLUE 2
Subtraction

Someone spent some arcade tickets at the prize counter. Subtract the used tickets from the starting total to decode the suspect's tell.

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

R																				
8978	2257	8624	4114	2997	4114	2827	8084	1093	2175	3905	4107	1093	8624	8925	2175	2175	8925	8925	8084	
5522	8084	2997	4114	8925	5960	5522	2957	2175	2997	2257	2846	3668								

$11526 - 2548 = \boxed{} \rightarrow \boxed{\text{R}}$

$3274 - 447 = \boxed{} \rightarrow \boxed{\text{A}}$

$6360 - 3514 = \boxed{} \rightarrow \boxed{\text{C}}$

$10734 - 2110 = \boxed{} \rightarrow \boxed{\text{G}}$

$5765 - 243 = \boxed{} \rightarrow \boxed{\text{O}}$

$6750 - 2643 = \boxed{} \rightarrow \boxed{\text{U}}$

$6790 - 4615 = \boxed{} \rightarrow \boxed{\text{S}}$

$5973 - 2305 = \boxed{} \rightarrow \boxed{\text{K}}$

$6837 - 3840 = \boxed{} \rightarrow \boxed{\text{T}}$

$2216 - 1123 = \boxed{} \rightarrow \boxed{\text{D}}$

$7456 - 3342 = \boxed{} \rightarrow \boxed{\text{H}}$

$4231 - 326 = \boxed{} \rightarrow \boxed{\text{M}}$

$12947 - 4863 = \boxed{} \rightarrow \boxed{\text{N}}$

$4269 - 2012 = \boxed{} \rightarrow \boxed{\text{I}}$

$5443 - 2486 = \boxed{} \rightarrow \boxed{\text{Y}}$

$9801 - 876 = \boxed{} \rightarrow \boxed{\text{E}}$

$8139 - 2179 = \boxed{} \rightarrow \boxed{\text{J}}$

Scratch space:

Multiplication facts (1-12)

There are stacks of green crewmate hats arranged in equal rows. Multiply the rows to find the next clue hidden under the boxes.

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

Diagram illustrating a sequence of numbers (110, 48, 66, 3, 25, 66, 72, 44, 44, 81, 63, 77, 45, 110, 10) and a corresponding sequence of numbers (10, 14, 81, 3, 3, 110, 30, 110, 84, 2, 110, 81, 30, 63, 25). The numbers 110 are highlighted in orange in both sequences.

$10 \times 11 = \boxed{} \rightarrow \boxed{\text{E}}$

$9 \times 5 = \boxed{} \rightarrow \boxed{\mathbf{x}}$

$1 \times 3 = \boxed{} \rightarrow \boxed{\text{T}}$

$12 \times 7 = \boxed{} \rightarrow \boxed{\mathbf{D}}$

$6 \times 11 = \boxed{} \rightarrow \boxed{\text{P}}$

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

$$4 \times 11 = \boxed{} \rightarrow \boxed{\mathbf{Z}}$$

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

$12 \times 6 = \boxed{} \rightarrow \boxed{I}$

$2 \times 1 = \boxed{} \rightarrow \boxed{\text{N}}$

$9 \times 7 = \boxed{} \rightarrow \boxed{\mathbf{B}}$

$$6 \times 5 = \boxed{} \rightarrow \boxed{\mathbf{R}}$$

$12 \times 4 = \boxed{} \rightarrow \boxed{\text{M}}$

$$5 \times 2 = \boxed{} \rightarrow \boxed{\text{S}}$$

$9 \times 9 = \boxed{} \rightarrow \boxed{\text{A}}$

$$7 \times 11 = \boxed{} \rightarrow \boxed{0}$$

$7 \times 2 = \boxed{} \rightarrow \boxed{\text{C}}$

Scratch space:

CLUE 4
Fractions of a number

We ordered a giant party pizza, but a fraction of the slices are missing. Calculate the eaten fraction to find the hair clue.

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

A										A				
28	13	3	6	8	35	12	13	19	20	28	6	26	11	22
						A				A				
25	20	11	29	6	7	28	3	20	29	28	13	22	11	34

$3/6 \text{ of } 56 = \square \rightarrow \text{A}$

$5/8 \text{ of } 56 = \square \rightarrow \text{L}$

$4/10 \text{ of } 30 = \square \rightarrow \text{E}$

$1/3 \text{ of } 66 = \square \rightarrow \text{F}$

$3/6 \text{ of } 58 = \square \rightarrow \text{W}$

$1/4 \text{ of } 136 = \square \rightarrow \text{U}$

$2/6 \text{ of } 21 = \square \rightarrow \text{H}$

$1/3 \text{ of } 24 = \square \rightarrow \text{G}$

$2/4 \text{ of } 26 = \square \rightarrow \text{S}$

$2/3 \text{ of } 39 = \square \rightarrow \text{D}$

$4/8 \text{ of } 50 = \square \rightarrow \text{B}$

$1/10 \text{ of } 30 = \square \rightarrow \text{I}$

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

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

$6/8 \text{ of } 8 = \square \rightarrow \text{N}$

$4/10 \text{ of } 50 = \square \rightarrow \text{R}$

Scratch space:

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

Only a fraction of our gaming controllers are fully charged. Find that fraction to unlock the final weakness 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:

$3/6 \text{ of } 12 = \boxed{}$

$1/5 \text{ of } 50 = \boxed{}$

$1/3 \text{ of } 15 = \boxed{}$

$2/10 \text{ of } 35 = \boxed{}$

$1/4 \text{ of } 8 = \boxed{}$

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

$1/3 \text{ of } 12 = \boxed{}$

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

$1/3 \text{ of } 33 = \boxed{}$

$1/2 \text{ of } 24 = \boxed{}$

$4/8 \text{ of } 16 = \boxed{}$

Step 2 - cross out the sentence with each answer:

1. The villain bounced over the lasers like a Pro Obbyist, then dropped a bright Red Crewmate Hat.
2. The villain vented like a sneaky Crewmate, then zipped up to the ceiling with a Grappling Hook.
3. The villain snuck past the security cameras disguised as a Roblox Knight, then gained extra health by eating a Golden Apple.
4. The villain vented like a sneaky Crewmate, then hacked the lights using a Glitch Controller.
5. The villain bounced over the lasers like a Pro Obbyist, then gained extra health by eating a Golden Apple.
6. The villain snuck past the security cameras disguised as a Roblox Knight, then zipped up to the ceiling with a Grappling Hook.
7. The villain built a secret passageway as a Minecraft Builder, then slashed a cake with a Diamond Sword.
8. The villain vented like a sneaky Crewmate, then slashed a cake with a Diamond Sword.
9. The villain sprinted through the hallways like a Speedrunner, then slashed a cake with a Diamond Sword.
10. The villain built a secret passageway as a Minecraft Builder, then dropped a bright Red Crewmate Hat.
11. The villain snuck past the security cameras disguised as a Roblox Knight, then slashed a cake with a Diamond Sword.
12. The villain built a secret passageway as a Minecraft Builder, then hacked the lights using a Glitch Controller.

Answer Key

The Mystery of the Missing Golden Button

Culprit: Connor

Roblox Knight · Golden Apple · Plays Right Handed · Brunette · Distracted by Pizza

Trail: Start 21 → Clue 1 19 → Clue 2 13 → Clue 3 6 → Clue 4 4 → Clue 5 1

Clue 1 (Addition): "THE SUSPECT HAS NO GLITCH CONTROLLER"

$3542 + 5845 = 9387$ (T) · $1636 + 1255 = 2891$ (C) · $1089 + 1041 = 2130$ (P) · $1811 + 1473 = 3284$ (E) · $4005 + 4186 = 8191$ (G) · $3707 + 4882 = 8589$ (I) · $3882 + 4398 = 8280$ (A) · $3600 + 1714 = 5314$ (R) · $1460 + 2662 = 4122$ (L) · $2452 + 2186 = 4638$ (S) · $3159 + 1878 = 5037$ (U) · $2988 + 2483 = 5471$ (H) · $1473 + 1795 = 3268$ (O) · $3266 + 5237 = 8503$ (N)

Clue 2 (Subtraction): "RIGHT HAND SMUDGES SEEN ON THE JOYSTICK"

$11526 - 2548 = 8978$ (R) · $3274 - 447 = 2827$ (A) · $6360 - 3514 = 2846$ (C) · $10734 - 2110 = 8624$ (G) · $5765 - 243 = 5522$ (O) · $6750 - 2643 = 4107$ (U) · $6790 - 4615 = 2175$ (S) · $5973 - 2305 = 3668$ (K) · $6837 - 3840 = 2997$ (T) · $2216 - 1123 = 1093$ (D) · $7456 - 3342 = 4114$ (H) · $4231 - 326 = 3905$ (M) · $12947 - 4863 = 8084$ (N) · $4269 - 2012 = 2257$ (I) · $5443 - 2486 = 2957$ (Y) · $9801 - 876 = 8925$ (E) · $8139 - 2179 = 5960$ (J)

Clue 3 (Multiplication facts (1-12)): "EMPTY PIZZA BOXES WERE SCATTERED NEARBY"

$10 \times 11 = 110$ (E) · $9 \times 5 = 45$ (X) · $1 \times 3 = 3$ (T) · $12 \times 7 = 84$ (D) · $6 \times 11 = 66$ (P) · $11 \times 5 = 55$ (W) · $4 \times 11 = 44$ (Z) · $5 \times 5 = 25$ (Y) · $12 \times 6 = 72$ (I) · $2 \times 1 = 2$ (N) · $9 \times 7 = 63$ (B) · $6 \times 5 = 30$ (R) · $12 \times 4 = 48$ (M) · $5 \times 2 = 10$ (S) · $9 \times 9 = 81$ (A) · $7 \times 11 = 77$ (O) · $7 \times 2 = 14$ (C)

Clue 4 (Fractions of a number): "A SINGLE STRAND OF BROWN HAIR WAS FOUND"

$\frac{3}{6}$ of 56 = 28 (A) · $\frac{5}{8}$ of 56 = 35 (L) · $\frac{4}{10}$ of 30 = 12 (E) · $\frac{1}{3}$ of 66 = 22 (F) · $\frac{3}{6}$ of 58 = 29 (W) · $\frac{1}{4}$ of 136 = 34 (U) · $\frac{2}{6}$ of 21 = 7 (H) · $\frac{1}{3}$ of 24 = 8 (G) · $\frac{2}{4}$ of 26 = 13 (S) · $\frac{2}{3}$ of 39 = 26 (D) · $\frac{4}{8}$ of 50 = 25 (B) · $\frac{1}{10}$ of 30 = 3 (I) · $\frac{1}{2}$ of 38 = 19 (T) · $\frac{1}{10}$ of 110 = 11 (O) · $\frac{6}{8}$ of 8 = 6 (N) · $\frac{4}{10}$ of 50 = 20 (R)

Clue 5 (Fractions of a number): surviving statement is box 3 → Connor

$\frac{3}{6}$ of 12 = 6 · $\frac{1}{5}$ of 50 = 10 · $\frac{1}{3}$ of 15 = 5 · $\frac{2}{10}$ of 35 = 7 · $\frac{1}{4}$ of 8 = 2 · $\frac{1}{10}$ of 90 = 9 · $\frac{1}{3}$ of 12 = 4 · $\frac{1}{3}$ of 3 = 1 · $\frac{1}{3}$ of 33 = 11 · $\frac{1}{2}$ of 24 = 12 · $\frac{4}{8}$ of 16 = 8