



The Great Museum Glitch

Grade 5 math · Multiplication, Fractions of a number, Order of operations, Rounding, Missing addends · Reading level grades 5-6

Detective: _____ Date: _____

A high-tech glitch has scrambled the exhibits at the Museum of Infinite Time! Historic Roman coins, legendary Chicago Cubs bats, and Michael Jackson gold records are vanishing into digital dust. The culprit is hiding among the museum staff, masked as a legendary Blook avatar. Use your detective skills and math savvy to crack the codes and restore history!

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 Glitch King is _____

Possible suspects

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

NAME	EXHIBIT SPECIALTY	RARE ARTIFACT	THROWING ARM	AVATAR WIG	DEFEAT CODE
Harold	Cubs Stadium Exhibit	Fedora Hat	Right handed throwing style	Blue ivy cap	History trivia quiz
Fergie	MJ Concert Stage	Golden Crown	Right handed throwing style	Blue ivy cap	History trivia quiz
Ernie	Ancient Egypt Tomb	Diamond Ring	Right handed throwing style	Curly black hair	History trivia quiz
Goldy	Ancient Egypt Tomb	Golden Crown	Right handed throwing style	Curly black hair	History trivia quiz
Janet	Space Race Hangar	Shiny Glove	Left handed throwing style	Blue ivy cap	History trivia quiz
Buster	Cubs Stadium Exhibit	Golden Crown	Right handed throwing style	Curly black hair	Pop music blast
Ryne	Ancient Egypt Tomb	Diamond Ring	Right handed throwing style	Blue ivy cap	Blook blast attack
Marlon	Roman Empire Gallery	Diamond Ring	Right handed throwing style	Blue ivy cap	History trivia quiz
Abigail	Ancient Egypt Tomb	Shiny Glove	Left handed throwing style	Curly black hair	History trivia quiz
Ron	MJ Concert Stage	Diamond Ring	Left handed throwing style	Powdered white wig	History trivia quiz
Quincy	Cubs Stadium Exhibit	Golden Crown	Right handed throwing style	Blue ivy cap	History trivia quiz
Franklin	Ancient Egypt Tomb	Golden Crown	Right handed throwing style	Blue ivy cap	Pop music blast
Lincoln	Space Race Hangar	Fedora Hat	Right handed throwing style	Blue ivy cap	Pop music blast
Kris	Cubs Stadium Exhibit	Lucky Bat	Right handed throwing style	Blue ivy cap	History trivia quiz
Anthony	MJ Concert Stage	Shiny Glove	Right handed throwing style	Curly black hair	History trivia quiz
Yeti	Roman Empire Gallery	Fedora Hat	Right handed throwing style	Blue ivy cap	Blook blast attack
Harriet	Ancient Egypt Tomb	Golden Crown	Left handed throwing style	Blue ivy cap	History trivia quiz
Sammy	Space Race Hangar	Golden Crown	Right handed throwing style	Blue ivy cap	Pop music blast
Tito	Roman Empire Gallery	Diamond Ring	Left handed throwing style	Curly black hair	Pop music blast
Clark	Cubs Stadium Exhibit	Lucky Bat	Left handed throwing style	Blue ivy cap	History trivia quiz
Billie	Cubs Stadium Exhibit	Shiny Glove	Right handed throwing style	Powdered white wig	Pop music blast

CLUE 1 Multiplication facts (1-12)

We find the security control room. To unlock the first clue, we must calculate the total number of Blook tokens arranged in equal rows.

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

$11 \times 8 = \boxed{} \rightarrow \boxed{\text{T}}$

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

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

$11 \times 4 = \boxed{} \rightarrow \boxed{\text{C}}$

$10 \times 5 = \boxed{} \rightarrow \boxed{\text{R}}$

$5 \times 11 = \square \rightarrow \boxed{\mathbf{F}}$

$3 \times 7 = \square \rightarrow \boxed{0}$

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

$7 \times 5 = \boxed{} \rightarrow \boxed{\mathbf{W}}$

$9 \times 6 = \boxed{} \rightarrow \boxed{\mathbf{A}}$

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

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

$$5 \times 4 = \boxed{} \rightarrow \boxed{\mathbf{S}}$$

$9 \times 12 = \boxed{} \rightarrow \boxed{\text{P}}$

Scratch space:

Fractions of a number

Inside the vintage Cubs dugout, a box of baseballs is partially used. Finding the fractional share of clean baseballs unlocks the next trace.

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

A number line from 0 to 100 with increments of 5. The number 34 is highlighted in orange and labeled with a 'T'.

2/4 of 68 = → **T**

$\frac{1}{4}$ of 104 = $\rightarrow$ **D**

$3/6$ of $74 = \boxed{} \rightarrow \boxed{\text{W}}$

$$5/10 \text{ of } 58 = \boxed{} \rightarrow \boxed{\text{H}}$$

$2/8$ of 68 = $\rightarrow$ **A**

$3/4$ of 24 = → **G**

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

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

$$\frac{1}{4} \text{ of } 160 = \boxed{} \rightarrow \boxed{\text{O}}$$

$$2/10 \text{ of } 165 = \boxed{} \rightarrow \boxed{\text{R}}$$

$2/6$ of $27 = \boxed{} \rightarrow \boxed{\text{S}}$

$\frac{1}{3}$ of 15 = $\rightarrow$

$\frac{1}{4}$ of 64 = $\rightarrow$ **F**

Scratch space:

CLUE 3 Order of operations

We reach the historic music studio. A complex control board requires a precise order of mathematical operations to play the correct song.

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

T			T										T						
45	31	23	45	31	53	23	14	40	64	76	76	79	45	64	76	71	54	23	19
				T				T											
64	31	53	71	45	79	19	21	45	19	53	66	53	64	43	75	53	68		

$6 \times 9 - 9 = \square \rightarrow$ T	$13 + 7 \times 9 = \square \rightarrow$ N	$28 + 5 \times 5 = \square \rightarrow$ I
$8 \times 11 - 9 = \square \rightarrow$ O	$8 \times 5 - 19 = \square \rightarrow$ Y	$9 + 2 \times 5 = \square \rightarrow$ R
$9 \times 9 - 6 = \square \rightarrow$ U	$34 + 4 \times 5 = \square \rightarrow$ W	$4 \times 6 - 1 = \square \rightarrow$ E
$7 + 4 \times 9 = \square \rightarrow$ Q	$7 \times 11 - 13 = \square \rightarrow$ A	$46 + 5 \times 4 = \square \rightarrow$ V
$34 + 2 \times 3 = \square \rightarrow$ C	$11 \times 8 - 20 = \square \rightarrow$ Z	$15 + 2 \times 8 = \square \rightarrow$ H
$9 \times 2 - 4 = \square \rightarrow$ F	$36 + 5 \times 7 = \square \rightarrow$ S	

Scratch space:

CLUE 4 Rounding

The museum radar detects a high speed glitch. The distance readout is fuzzy, so we must round the speed to the nearest hundred to lock its path.

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

T			T													
20	370	500	20	370	30	500	7000	200	430	900	1100	1100	500	200	5000	
1700	3000	1300	500	30	110	290	50	5000	1100							

Round 20 to the nearest ten → **T**

Round 373 to the nearest ten → **H**

Round 7,113 to the nearest thousand → **F**

Round 1,062 to the nearest hundred → **P**

Round 531 to the nearest hundred → **E**

Round 434 to the nearest ten → **R**

Round 53 to the nearest ten → **C**

Round 1,725 to the nearest hundred → **B**

Round 935 to the nearest hundred → **O**

Round 1,343 to the nearest hundred → **U**

Round 114 to the nearest ten → **V**

Round 293 to the nearest ten → **Y**

Round 184 to the nearest hundred → **D**

Round 3,182 to the nearest thousand → **L**

Round 33 to the nearest ten → **I**

Round 4,955 to the nearest thousand → **A**

Scratch space:

CLUE 5**Missing addends - the last clue**

At the ancient Roman gate, some stone bricks are missing. Solving for the missing weight needed to balance the scale reveals the 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:

$40 + \underline{\quad} = 48$

$22 + \underline{\quad} = 26$

$39 + \underline{\quad} = 40$

$22 + \underline{\quad} = 34$

$10 + \underline{\quad} = 15$

$24 + \underline{\quad} = 30$

$40 + \underline{\quad} = 47$

$15 + \underline{\quad} = 24$

$13 + \underline{\quad} = 23$

$4 + \underline{\quad} = 15$

$8 + \underline{\quad} = 10$

Step 2 - cross out the sentence with each answer:

1. The villain dances across the MJ Concert Stage, then steals the Golden Crown of Rome.
2. The villain marches through the Roman Empire Gallery, then grabs the famous Shiny Glove.
3. The villain sneaks onto the Cubs Stadium Exhibit, then escapes with the Lucky Bat.
4. The villain sneaks onto the Cubs Stadium Exhibit, then steals the Golden Crown of Rome.
5. The villain sneaks into the Ancient Egypt Tomb, then swipes the iconic Fedora Hat.
6. The villain dances across the MJ Concert Stage, then grabs the Diamond Ring and flees.
7. The villain sneaks onto the Cubs Stadium Exhibit, then grabs the famous Shiny Glove.
8. The villain marches through the Roman Empire Gallery, then grabs the Diamond Ring and flees.
9. The villain marches through the Roman Empire Gallery, then escapes with the Lucky Bat.
10. The villain sneaks into the Ancient Egypt Tomb, then escapes with the Lucky Bat.
11. The villain flies through the Space Race Hangar, then steals the Golden Crown of Rome.
12. The villain dances across the MJ Concert Stage, then grabs the famous Shiny Glove.

Answer Key

The Great Museum Glitch

Culprit: Kris

Cubs Stadium Exhibit · Lucky Bat · Right handed throwing style · Blue ivy cap · History trivia quiz

Trail: Start 21 → Clue 1 18 → Clue 2 12 → Clue 3 7 → Clue 4 4 → Clue 5 1

Clue 1 (Multiplication facts (1-12)): "THE SUSPECT DOES NOT OWN THE FEDORA HAT"

$11 \times 8 = 88$ (T) · $12 \times 7 = 84$ (H) · $9 \times 9 = 81$ (E) · $11 \times 4 = 44$ (C) · $10 \times 5 = 50$ (R) · $5 \times 11 = 55$ (F) · $3 \times 7 = 21$ (O) · $5 \times 6 = 30$ (N) · $7 \times 5 = 35$ (W) · $9 \times 6 = 54$ (A) · $6 \times 11 = 66$ (U) · $7 \times 7 = 49$ (D) · $5 \times 4 = 20$ (S) · $9 \times 12 = 108$ (P)

Clue 2 (Fractions of a number): "THE THIEF SHOWS A RIGHT HANDED THROW"

$\frac{2}{4}$ of 68 = 34 (T) · $\frac{1}{4}$ of 104 = 26 (D) · $\frac{3}{6}$ of 74 = 37 (W) · $\frac{5}{10}$ of 58 = 29 (H) · $\frac{2}{8}$ of 68 = 17 (A) · $\frac{3}{4}$ of 24 = 18 (G) · $\frac{2}{6}$ of 21 = 7 (N) · $\frac{1}{10}$ of 40 = 4 (E) · $\frac{1}{4}$ of 160 = 40 (O) · $\frac{2}{10}$ of 165 = 33 (R) · $\frac{2}{6}$ of 27 = 9 (S) · $\frac{1}{3}$ of 15 = 5 (I) · $\frac{1}{4}$ of 64 = 16 (F)

Clue 3 (Order of operations): "THE THIEF CANNOT ANSWER A HISTORY TRIVIA QUIZ"

$6 \times 9 - 9 = 45$ (T) · $13 + 7 \times 9 = 76$ (N) · $28 + 5 \times 5 = 53$ (I) · $8 \times 11 - 9 = 79$ (O) · $8 \times 5 - 19 = 21$ (Y) · $9 + 2 \times 5 = 19$ (R) · $9 \times 9 - 6 = 75$ (U) · $34 + 4 \times 5 = 54$ (W) · $4 \times 6 - 1 = 23$ (E) · $7 + 4 \times 9 = 43$ (Q) · $7 \times 11 - 13 = 64$ (A) · $46 + 5 \times 4 = 66$ (V) · $34 + 2 \times 3 = 40$ (C) · $11 \times 8 - 20 = 68$ (Z) · $15 + 2 \times 8 = 31$ (H) · $9 \times 2 - 4 = 14$ (F) · $36 + 5 \times 7 = 71$ (S)

Clue 4 (Rounding): "THE THIEF DROPPED A BLUE IVY CAP"

Round 20 to the nearest ten = 20 (T) · Round 373 to the nearest ten = 370 (H) · Round 7,113 to the nearest thousand = 7000 (F) · Round 1,062 to the nearest hundred = 1100 (P) · Round 531 to the nearest hundred = 500 (E) · Round 434 to the nearest ten = 430 (R) · Round 53 to the nearest ten = 50 (C) · Round 1,725 to the nearest hundred = 1700 (B) · Round 935 to the nearest hundred = 900 (O) · Round 1,343 to the nearest hundred = 1300 (U) · Round 114 to the nearest ten = 110 (V) · Round 293 to the nearest ten = 290 (Y) · Round 184 to the nearest hundred = 200 (D) · Round 3,182 to the nearest thousand = 3000 (L) · Round 33 to the nearest ten = 30 (I) · Round 4,955 to the nearest thousand = 5000 (A)

Clue 5 (Missing addends): surviving statement is box 3 → Kris

$40 + \underline{\quad} = 48 = 8$ · $22 + \underline{\quad} = 26 = 4$ · $39 + \underline{\quad} = 40 = 1$ · $22 + \underline{\quad} = 34 = 12$ · $10 + \underline{\quad} = 15 = 5$ · $24 + \underline{\quad} = 30 = 6$ · $40 + \underline{\quad} = 47 = 7$ · $15 + \underline{\quad} = 24 = 9$ · $13 + \underline{\quad} = 23 = 10$ · $4 + \underline{\quad} = 15 = 11$ · $8 + \underline{\quad} = 10 = 2$