



The Grand Slam Gold Mystery

Grade 7 math · Integers, Percentages, Order of operations, Exponents, Two-step equations · Reading level grades 5-6

Detective: _____ **Date:** _____

The legendary Golden Glove trophy has vanished from the Grand Slam Stadium trophy case right before the championship game! The head groundskeeper needs your help to track down the sneaky stadium saboteur before the first pitch is thrown.

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 stadium saboteur is _____

Possible suspects

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

NAME	PITCHING STYLE	LUCKY GEAR	THROWING ARM	CAP STYLE	FAVORITE SNACK
Ty Cobb	Blazing Fastball	Shiny Golden Cleats	Left Handed Thrower	Backward Cap	Salty Peanuts
Mookie Betts	Blazing Fastball	Lucky Pine Tar Bat	Left Handed Thrower	Visor Hat	Sunflower Seeds
Babe Ruth	Wobbly Knuckleball	Shiny Golden Cleats	Right Handed Thrower	Forward Cap	Sunflower Seeds
Ken Griffey	Tricky Curveball	Shiny Golden Cleats	Left Handed Thrower	Visor Hat	Sticky Bubble Gum
Derek Jeter	Slow Changeup	Secret Scuffed Ball	Right Handed Thrower	Visor Hat	Salty Peanuts
Aaron Judge	Wobbly Knuckleball	Heavy Batting Donut	Left Handed Thrower	Visor Hat	Sticky Bubble Gum
Mike Trout	Blazing Fastball	Shiny Golden Cleats	Left Handed Thrower	Visor Hat	Salty Peanuts
Shohei Ohtani	Tricky Curveball	Heavy Batting Donut	Right Handed Thrower	Forward Cap	Sunflower Seeds
Yogi Berra	Tricky Curveball	Shiny Golden Cleats	Right Handed Thrower	Forward Cap	Salty Peanuts
Honus Wagner	Blazing Fastball	Leathery Batting Gloves	Left Handed Thrower	Forward Cap	Salty Peanuts
Nolan Ryan	Tricky Curveball	Secret Scuffed Ball	Right Handed Thrower	Visor Hat	Sunflower Seeds
Willie Mays	Tricky Curveball	Heavy Batting Donut	Left Handed Thrower	Visor Hat	Sticky Bubble Gum
Sandy Koufax	Slow Changeup	Secret Scuffed Ball	Right Handed Thrower	Visor Hat	Sunflower Seeds
Ichiro Suzuki	Wobbly Knuckleball	Heavy Batting Donut	Right Handed Thrower	Visor Hat	Sticky Bubble Gum
Ted Williams	Sharp Slider	Secret Scuffed Ball	Left Handed Thrower	Visor Hat	Sticky Bubble Gum
Reggie Jackson	Tricky Curveball	Lucky Pine Tar Bat	Right Handed Thrower	Forward Cap	Sunflower Seeds
Stan Musial	Blazing Fastball	Heavy Batting Donut	Right Handed Thrower	Visor Hat	Sticky Bubble Gum
Cy Young	Blazing Fastball	Heavy Batting Donut	Left Handed Thrower	Visor Hat	Sticky Bubble Gum
Buster Posey	Slow Changeup	Heavy Batting Donut	Right Handed Thrower	Forward Cap	Salty Peanuts
Jackie Robinson	Wobbly Knuckleball	Lucky Pine Tar Bat	Left Handed Thrower	Forward Cap	Sticky Bubble Gum
Hank Aaron	Slow Changeup	Heavy Batting Donut	Left Handed Thrower	Forward Cap	Sticky Bubble Gum

CLUE 1 Integers

The digital scoreboard took a hit during the heist, making the home team's run count swing up and down. Calculate the final score using these positive and negative integers to unlock the first clue.

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

Diagram illustrating a sequence of numbers in boxes, with some boxes highlighted in orange to indicate a specific value (18) or a transition (T).

Top row of boxes (19 boxes total):

- Box 1: 18 (highlighted with orange 'T')
- Box 2: 4
- Box 3: 21
- Box 4: 22
- Box 5: 30
- Box 6: 13
- Box 7: 13
- Box 8: 26
- Box 9: 12
- Box 10: 13
- Box 11: 21
- Box 12: 22
- Box 13: 30
- Box 14: 13
- Box 15: 18 (highlighted with orange 'T')
- Box 16: 6
- Box 17: 22
- Box 18: 21
- Box 19: 1

Bottom row of boxes (15 boxes total):

- Box 1: 22
- Box 2: 21
- Box 3: 29
- Box 4: 19
- Box 5: 21
- Box 6: 18 (highlighted with orange 'T')
- Box 7: 22
- Box 8: 29
- Box 9: 6
- Box 10: 14
- Box 11: 14
- Box 12: 21
- Box 13: 12
- Box 14: 23
- Box 15: 1
- Box 16: 9
- Box 17: 9

$$(-7) + 25 = \boxed{} \rightarrow \boxed{\text{T}}$$

$10 - (-12) = \boxed{} \rightarrow \boxed{\text{S}}$

$$(-4) + 30 = \boxed{} \rightarrow \boxed{\text{P}}$$

$$(-5) + 6 = \boxed{} \rightarrow \boxed{\mathbf{A}}$$

$$24 - (-5) = \boxed{} \rightarrow \boxed{\text{C}}$$

$$6 - (-8) = \boxed{} \rightarrow \boxed{\text{F}}$$

$$(-12) + 16 = \boxed{} \rightarrow \boxed{\text{H}}$$

$$20 - (-10) = \boxed{} \rightarrow \boxed{\text{N}}$$

$$8 - (-5) = \boxed{} \rightarrow \boxed{0}$$

$$(-7) + 26 = \boxed{} \rightarrow \boxed{\mathbf{R}}$$

$$5 - (-4) = \boxed{} \rightarrow \boxed{\text{L}}$$

$$(-8) + 14 = \boxed{} \rightarrow \boxed{\text{U}}$$

$$(-14) + 37 = \boxed{} \rightarrow \boxed{\mathbf{B}}$$

$8 - (-4) = \boxed{} \rightarrow \boxed{\text{D}}$

$$(-1) + 22 = \boxed{} \rightarrow \boxed{\text{E}}$$

Scratch space:

CLUE 2 Percentages

The stadium computer has a security bar that fills up as it decodes the locker room entry codes. Solve these percentage problems to see how much progress the system has made.

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

A						A											
55	18	1	10	47	7	55	6	22	1	22	47	7	40	32	4	1	40
18	1	10	47	47	7	28	2	38	18	32	54	1					

$50\% \text{ of } 110 = \square \rightarrow \boxed{\text{A}}$

$10\% \text{ of } 220 = \square \rightarrow \boxed{\text{D}}$

$50\% \text{ of } 56 = \square \rightarrow \boxed{\text{I}}$

$10\% \text{ of } 320 = \square \rightarrow \boxed{\text{O}}$

$20\% \text{ of } 30 = \square \rightarrow \boxed{\text{N}}$

$20\% \text{ of } 35 = \square \rightarrow \boxed{\text{H}}$

$50\% \text{ of } 2 = \square \rightarrow \boxed{\text{E}}$

$40\% \text{ of } 95 = \square \rightarrow \boxed{\text{G}}$

$50\% \text{ of } 8 = \square \rightarrow \boxed{\text{W}}$

$40\% \text{ of } 5 = \square \rightarrow \boxed{\text{S}}$

$10\% \text{ of } 400 = \square \rightarrow \boxed{\text{R}}$

$10\% \text{ of } 470 = \square \rightarrow \boxed{\text{T}}$

$40\% \text{ of } 135 = \square \rightarrow \boxed{\text{V}}$

$25\% \text{ of } 40 = \square \rightarrow \boxed{\text{F}}$

$25\% \text{ of } 72 = \square \rightarrow \boxed{\text{L}}$

Scratch space:

CLUE 3
Order of operations

The umpire left a puzzle on his clipboard showing how he groups the extra gear. Solve this multi-step equation using the correct order of operations to find a clue.

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

W																		
20	84	35	90	81	10	8	47	59	6	57	114	11	88	81	88	88	83	84
105	81	108	90	10	59	48	84	88	84	10	57	48						

$10 + 2 \times 5 = \square \rightarrow \text{W}$

$8 \times 12 - 13 = \square \rightarrow \text{L}$

$8 \times 8 - 7 = \square \rightarrow \text{C}$

$6 \times 8 - 13 = \square \rightarrow \text{F}$

$9 \times 12 - 3 = \square \rightarrow \text{G}$

$12 \times 10 - 12 = \square \rightarrow \text{M}$

$82 + 2 \times 4 = \square \rightarrow \text{O}$

$6 \times 4 - 18 = \square \rightarrow \text{I}$

$12 + 9 \times 8 = \square \rightarrow \text{E}$

$4 + 2 \times 3 = \square \rightarrow \text{N}$

$8 \times 7 - 9 = \square \rightarrow \text{S}$

$10 \times 11 - 29 = \square \rightarrow \text{U}$

$64 + 3 \times 8 = \square \rightarrow \text{B}$

$10 \times 7 - 22 = \square \rightarrow \text{H}$

$11 \times 11 - 7 = \square \rightarrow \text{K}$

$9 \times 3 - 19 = \square \rightarrow \text{D}$

$1 + 5 \times 2 = \square \rightarrow \text{Y}$

$41 + 6 \times 3 = \square \rightarrow \text{T}$

Scratch space:

CLUE 4 Exponents

The high-tech stadium lights are arranged in grid patterns that multiply quickly. Calculate these exponential values to find which light towers the suspect sneaked past.

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

T			T													
64	196	25	64	196	169	25	144	361	32	289	8	8	25	361	100	
							T				T					
343	169	216	289	32	196	100	64	289	324	64	196	25				
169	324	144	169	25	27	361										

$4^3 = \square \rightarrow$ T	$12^2 = \square \rightarrow$ F	$14^2 = \square \rightarrow$ H	$18^2 = \square \rightarrow$ N
$6^3 = \square \rightarrow$ S	$13^2 = \square \rightarrow$ I	$7^3 = \square \rightarrow$ V	$10^2 = \square \rightarrow$ A
$2^3 = \square \rightarrow$ P	$5^2 = \square \rightarrow$ E	$17^2 = \square \rightarrow$ O	$19^2 = \square \rightarrow$ D
$2^5 = \square \rightarrow$ R	$3^3 = \square \rightarrow$ L		

Scratch space:

CLUE 5**Two-step equations - the last clue**

The concession stand receipt shows the total cost for a big group of fans plus a fixed stadium tax. Solve these two-step equations to find out exactly how many tickets the suspect bought.

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:

$3x + 12 = 24, x = \boxed{}$

$6x + 2 = 56, x = \boxed{}$

$3x + 3 = 39, x = \boxed{}$

$6x + 5 = 41, x = \boxed{}$

$5x + 4 = 54, x = \boxed{}$

$5x + 9 = 19, x = \boxed{}$

$3x + 4 = 25, x = \boxed{}$

$3x + 5 = 8, x = \boxed{}$

$4x + 1 = 45, x = \boxed{}$

$6x + 2 = 50, x = \boxed{}$

$3x + 11 = 20, x = \boxed{}$

Step 2 - cross out the sentence with each answer:

1. The villain slips a slow changeup into the gear bag, then sneaks off with a secret scuffed ball.
2. The villain throws a blazing fastball past the camera, then adjusts a pair of leathery batting gloves.
3. The villain slips a slow changeup into the gear bag, then swings a lucky pine tar bat.
4. The villain snaps a tricky curveball into the dugout, then stomps away in shiny golden cleats.
5. The villain unleashes a wobbly knuckleball over the plate, then drops a heavy batting donut on the turf.
6. The villain slips a slow changeup into the gear bag, then drops a heavy batting donut on the turf.
7. The villain throws a blazing fastball past the camera, then sneaks off with a secret scuffed ball.
8. The villain hurls a sharp slider near the bullpen, then sneaks off with a secret scuffed ball.
9. The villain snaps a tricky curveball into the dugout, then drops a heavy batting donut on the turf.
10. The villain unleashes a wobbly knuckleball over the plate, then stomps away in shiny golden cleats.
11. The villain throws a blazing fastball past the camera, then swings a lucky pine tar bat.
12. The villain throws a blazing fastball past the camera, then drops a heavy batting donut on the turf.

Answer Key

The Grand Slam Gold Mystery

Culprit: Aaron Judge

Wobbly Knuckleball · Heavy Batting Donut · Left Handed Thrower · Visor Hat · Sticky Bubble Gum

Trail: Start 21 → Clue 1 17 → Clue 2 10 → Clue 3 6 → Clue 4 4 → Clue 5 1

Clue 1 (Integers): "THE SNOOP DOES NOT USE A SECRET SCUFFED BALL"

$(-7) + 25 = 18$ (T) · $10 - (-12) = 22$ (S) · $(-4) + 30 = 26$ (P) · $(-5) + 6 = 1$ (A) · $24 - (-5) = 29$ (C) · $6 - (-8) = 14$ (F) · $(-12) + 16 = 4$ (H) · $20 - (-10) = 30$ (N) · $8 - (-5) = 13$ (O) · $(-7) + 26 = 19$ (R) · $5 - (-4) = 9$ (L) · $(-8) + 14 = 6$ (U) · $(-14) + 37 = 23$ (B) · $8 - (-4) = 12$ (D) · $(-1) + 22 = 21$ (E)

Clue 2 (Percentages): "A LEFT HANDED THROWER LEFT THIS GLOVE"

50% of 110 = 55 (A) · 10% of 220 = 22 (D) · 50% of 56 = 28 (I) · 10% of 320 = 32 (O) · 20% of 30 = 6 (N) · 20% of 35 = 7 (H) · 50% of 2 = 1 (E) · 40% of 95 = 38 (G) · 50% of 8 = 4 (W) · 40% of 5 = 2 (S) · 10% of 400 = 40 (R) · 10% of 470 = 47 (T) · 40% of 135 = 54 (V) · 25% of 40 = 10 (F) · 25% of 72 = 18 (L)

Clue 3 (Order of operations): "WE FOUND STICKY BUBBLE GUM ON THE BENCH"

$10 + 2 \times 5 = 20$ (W) · $8 \times 12 - 13 = 83$ (L) · $8 \times 8 - 7 = 57$ (C) · $6 \times 8 - 13 = 35$ (F) · $9 \times 12 - 3 = 105$ (G) · $12 \times 10 - 12 = 108$ (M) · $82 + 2 \times 4 = 90$ (O) · $6 \times 4 - 18 = 6$ (I) · $12 + 9 \times 8 = 84$ (E) · $4 + 2 \times 3 = 10$ (N) · $8 \times 7 - 9 = 47$ (S) · $10 \times 11 - 29 = 81$ (U) · $64 + 3 \times 8 = 88$ (B) · $10 \times 7 - 22 = 48$ (H) · $11 \times 11 - 7 = 114$ (K) · $9 \times 3 - 19 = 8$ (D) · $1 + 5 \times 2 = 11$ (Y) · $41 + 6 \times 3 = 59$ (T)

Clue 4 (Exponents): "THE THIEF DROPPED A VISOR HAT ON THE INFIELD"

$4^4 = 64$ (T) · $12^2 = 144$ (F) · $14^2 = 196$ (H) · $18^2 = 324$ (N) · $6^3 = 216$ (S) · $13^2 = 169$ (I) · $7^3 = 343$ (V) · $10^2 = 100$ (A) · $2^3 = 8$ (P) · $5^2 = 25$ (E) · $17^2 = 289$ (O) · $19^2 = 361$ (D) · $2^5 = 32$ (R) · $3^3 = 27$ (L)

Clue 5 (Two-step equations): surviving statement is box 5 → Aaron Judge

$3x + 12 = 24, x = 4$ · $6x + 2 = 56, x = 9$ · $3x + 3 = 39, x = 12$ · $6x + 5 = 41, x = 6$ · $5x + 4 = 54, x = 10$ · $5x + 9 = 19, x = 2$ · $3x + 4 = 25, x = 7$ · $3x + 5 = 8, x = 1$ · $4x + 1 = 45, x = 11$ · $6x + 2 = 50, x = 8$ · $3x + 11 = 20, x = 3$