



The World Cup Anthem Heist

Grade 5 math · Fractions of a number, Bar models, Multi-step word problems, Order of operations, Missing addends ·
Reading level grades 5-6

Detective: _____ **Date:** _____

The Golden Playlist containing all the legendary World Cup anthems has been stolen right before the global kickoff concert! The stadium speaker system is silent, and the crowd is waiting. We need to crack the math clues to find the Melody Marauder and restore the rhythm of the game!

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 Melody Marauder is _____

Possible suspects

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

NAME	FAVORITE ANTHEM	SIGNATURE INSTRUMENT	MIC HANDEDNESS	HAIR EVIDENCE	STUMPING OBSTACLE
Claudia	Wavin Flag Chorus	Maraca Shakers	Uses Right Hand for Mic	Bright Neon Green Hair	Distracted by Confetti Cannon
Ricky	Cup of Life Beat	Maraca Shakers	Uses Left Hand for Mic	Bright Neon Green Hair	Tripped on Microphone Cable
Jason Derulo	Cup of Life Beat	Maraca Shakers	Uses Right Hand for Mic	Spiky Golden Hair	Distracted by Confetti Cannon
Bad Bunny	Waka Waka Anthem	Vuvuzela Horn	Uses Right Hand for Mic	Spiky Golden Hair	Stuck in Stadium Turnstile
Nelly Furtado	We Are One Verse	Samba Drum	Uses Right Hand for Mic	Spiky Golden Hair	Distracted by Confetti Cannon
Gims	Magic in the Air Tune	Electric Bass	Uses Right Hand for Mic	Braided Blue Hair	Tripped on Microphone Cable
Lil Baby	We Are One Verse	Electric Bass	Uses Right Hand for Mic	Spiky Golden Hair	Distracted by Confetti Cannon
Jungkook	Cup of Life Beat	Samba Drum	Uses Right Hand for Mic	Spiky Golden Hair	Tripped on Microphone Cable
David Guetta	Cup of Life Beat	Synthesizer Keytar	Uses Right Hand for Mic	Spiky Golden Hair	Tripped on Microphone Cable
Knaan	Waka Waka Anthem	Synthesizer Keytar	Uses Left Hand for Mic	Spiky Golden Hair	Tripped on Microphone Cable
Anastacia	We Are One Verse	Synthesizer Keytar	Uses Left Hand for Mic	Spiky Golden Hair	Stuck in Stadium Turnstile
Jennifer	Cup of Life Beat	Electric Bass	Uses Left Hand for Mic	Spiky Golden Hair	Distracted by Confetti Cannon
Carlos Santana	Cup of Life Beat	Maraca Shakers	Uses Left Hand for Mic	Braided Blue Hair	Distracted by Confetti Cannon
Will Smith	We Are One Verse	Synthesizer Keytar	Uses Right Hand for Mic	Spiky Golden Hair	Tripped on Microphone Cable
Alok	Cup of Life Beat	Synthesizer Keytar	Uses Right Hand for Mic	Spiky Golden Hair	Distracted by Confetti Cannon
Ozuna	Magic in the Air Tune	Synthesizer Keytar	Uses Right Hand for Mic	Bright Neon Green Hair	Stuck in Stadium Turnstile
Pitbull	Waka Waka Anthem	Vuvuzela Horn	Uses Right Hand for Mic	Spiky Golden Hair	Distracted by Confetti Cannon
Diplo	Cup of Life Beat	Electric Bass	Uses Right Hand for Mic	Braided Blue Hair	Distracted by Confetti Cannon
Stromae	We Are One Verse	Vuvuzela Horn	Uses Left Hand for Mic	Spiky Golden Hair	Stuck in Stadium Turnstile
Nicky Jam	We Are One Verse	Samba Drum	Uses Right Hand for Mic	Spiky Golden Hair	Tripped on Microphone Cable
Avicii	Wavin Flag Chorus	Vuvuzela Horn	Uses Left Hand for Mic	Braided Blue Hair	Stuck in Stadium Turnstile

CLUE 1

We must calculate the total number of VIP passes handed out across the stadium zones and subtract the lost badges to unlock the first suspect profile.

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

Diagram illustrating the sequence of numbers: 10, 31, 24, 5, 27, 20, 36, 10, 24, 37, 23, 15, 36, 24, 5, 38, 36, 10, 37, 5, 24, 14, 27, 23, 27, 34, 27, 5, 31, 27, 13, 24, 23, 5. The number 10 is highlighted in orange in the first row, and the number 37 is highlighted in orange in the second row.

5/10 of 20 = → **T**

$1/2$ of 30 = $\rightarrow$ **D**

$\frac{4}{8}$ of 28 = $\rightarrow$ **M**

$8/10$ of 25 = $\rightarrow$ **B**

$\frac{1}{8}$ of 40 = $\rightarrow$ **S**

2/10 of 185 = →

$2/8$ of $92 = \square \rightarrow \boxed{\mathbf{R}}$

2/6 of 93 = → **H**

$3/6$ of $76 = \square \rightarrow \boxed{\text{N}}$

$3/6$ of $68 = \square \rightarrow \boxed{\text{C}}$

$2/8$ of 52 = $\rightarrow$ **K**

$\frac{1}{2}$ of 72 = $\rightarrow$ ☐

$3/5$ of $45 = \square \rightarrow \boxed{\mathbf{A}}$

$\frac{1}{3}$ of 72 = $\rightarrow$ **E**

Scratch space:

CLUE 2

Bar model word problems

The sound technicians are comparing the bass volume outputs of two stage monitors using a bar model to help narrow down the suspect physical traits.

Draw a bar model to solve each word problem, then write its letter in the boxes to fill in the missing word.

A witness saw the villain was

U

T

A
N
D
F
O

M

C
 .

57 122 12 122 77 96 139 52 52 77 96

One group collected 54 soccer balls and another group collected 3 soccer balls. How many soccer balls in all?

draw a bar model

Answer: → U

There were 78 microphones in all. 26 microphones were used. How many microphones are left?

draw a bar model

Answer: → H

One group collected 42 glow sticks and another group collected 97 glow sticks. How many glow sticks in all?

draw a bar model

Answer: → G

Stadium DJ has 2 times as many vuvuzelas as a teammate. The teammate has 6 vuvuzelas. How many vuvuzelas does stadium DJ have?

draw a bar model

Answer: → E

There were 109 stadium tickets in all. 13 stadium tickets were used. How many stadium tickets are left?

draw a bar model

Answer: → I

One group collected 86 soccer balls and another group collected 36 soccer balls. How many soccer balls in all?

draw a bar model

Answer: → S

Stadium DJ has 11 times as many vuvuzelas as a teammate. The teammate has 7 vuvuzelas. How many vuvuzelas does stadium DJ have?

draw a bar model

Answer: → R

CLUE 3

Multi-step word problems

Only a fraction of the stadium lights are currently turned on for the pre-show, and calculating that fraction reveals the hair sample data.

Solve each problem, then write its letter in the boxes to fill in the missing word.

Someone scared the villain off with

D								E	D	B	Y		O	N	F	E							N	N	O	N
84	21	36	26	31	56	34	26		84			34					26	26	21			34	56			

There were 267 soccer balls in all. 15 soccer balls were set aside. The rest were shared equally among 3 Opening Ceremony Crew. How many soccer balls did each get?

Answer: → **D**

There were 160 microphones in all. 2 Opening Ceremony Crew used 12 microphones each. The other 4 Opening Ceremony Crew shared the rest equally. How many microphones did each of the other Opening Ceremony Crew get?

Answer: → **C**

Stadium DJ collected 22 vuvuzelas in the morning and 20 vuvuzelas in the afternoon, then split them equally among 2 Opening Ceremony Crew. How many vuvuzelas did each get?

Answer: → **I**

There were 201 microphones in all. 19 microphones were set aside. The rest were shared equally among 7 Opening Ceremony Crew. How many microphones did each get?

Answer: → **T**

There were 432 soccer balls in all. 40 soccer balls were set aside. The rest were shared equally among 7 Opening Ceremony Crew. How many soccer balls did each get?

Answer: → **A**

Stadium DJ collected 53 vuvuzelas in the morning and 19 vuvuzelas in the afternoon, then split them equally among 2 Opening Ceremony Crew. How many vuvuzelas did each get?

Answer: → **S**

There were 207 vuvuzelas in all. 1 Opening Ceremony Crew used 21 vuvuzelas each. The other 6 Opening Ceremony Crew shared the rest equally. How many vuvuzelas did each of the other Opening Ceremony Crew get?

Answer: → **R**

Scratch space:

CLUE 4 Order of operations

We need to follow the proper order of operations to adjust the main mixing board and pinpoint the suspect weakness.

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

G																	
37	19	64	41	65	36	13	66	39	25	16	13	8	45	43	36	41	13
23	65	45	65	19	36	8	72	65	72	65	43	41	13	65	8		

$13 + 6 \times 4 = \square \rightarrow \text{G}$	$7 \times 7 - 30 = \square \rightarrow \text{O}$	$11 + 3 \times 4 = \square \rightarrow \text{W}$
$3 \times 9 - 2 = \square \rightarrow \text{K}$	$10 \times 6 - 15 = \square \rightarrow \text{R}$	$8 \times 7 - 15 = \square \rightarrow \text{D}$
$7 \times 12 - 19 = \square \rightarrow \text{E}$	$11 \times 3 - 25 = \square \rightarrow \text{T}$	$7 \times 12 - 12 = \square \rightarrow \text{H}$
$29 + 5 \times 7 = \square \rightarrow \text{L}$	$4 + 3 \times 3 = \square \rightarrow \text{S}$	$41 + 5 \times 5 = \square \rightarrow \text{P}$
$3 \times 8 - 8 = \square \rightarrow \text{Y}$	$15 + 3 \times 7 = \square \rightarrow \text{N}$	$15 + 6 \times 4 = \square \rightarrow \text{I}$
$6 \times 11 - 23 = \square \rightarrow \text{A}$		

Scratch space:

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

The stadium entrance gates need a specific number of spectators to pass through. Find the missing addend to determine the suspect mic hand.

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:

$4 + \underline{\quad} = 8$

$35 + \underline{\quad} = 41$

$23 + \underline{\quad} = 24$

$36 + \underline{\quad} = 47$

$25 + \underline{\quad} = 27$

$17 + \underline{\quad} = 25$

$29 + \underline{\quad} = 41$

$36 + \underline{\quad} = 43$

$17 + \underline{\quad} = 26$

$29 + \underline{\quad} = 34$

$25 + \underline{\quad} = 35$

Step 2 - cross out the sentence with each answer:

1. The villain swapped the opening track, then beat a rapid samba drum.
2. The villain muted the stadium speakers, then rattled the maraca shakers.
3. The villain muted the stadium speakers, then smashed a synthesizer keytar.
4. The villain stole the golden playlist, then blew a loud vuvuzela.
5. The villain muted the stadium speakers, then beat a rapid samba drum.
6. The villain swapped the opening track, then unplugged the electric bass.
7. The villain muted the stadium speakers, then blew a loud vuvuzela.
8. The villain swapped the opening track, then rattled the maraca shakers.
9. The villain swapped the opening track, then smashed a synthesizer keytar.
10. The villain locked the DJ booth, then smashed a synthesizer keytar.
11. The villain muted the stadium speakers, then unplugged the electric bass.
12. The villain locked the DJ booth, then beat a rapid samba drum.

Answer Key

The World Cup Anthem Heist

Culprit: Alok

Cup of Life Beat · Synthesizer Keytar · Uses Right Hand for Mic · Spiky Golden Hair · Distracted by Confetti Cannon

Trail: Start 21 → Clue 1 17 → Clue 2 12 → Clue 3 5 → Clue 4 4 → Clue 5 1

Clue 1 (Fractions of a number): "THE SABOTEUR DOES NOT USE MARACA SHAKERS"

$5/10$ of 20 = 10 (T) · $1/2$ of 30 = 15 (D) · $4/8$ of 28 = 14 (M) · $8/10$ of 25 = 20 (B) · $1/8$ of 40 = 5 (S) · $2/10$ of 185 = 37 (U) · $2/8$ of 92 = 23 (R) · $2/6$ of 93 = 31 (H) · $3/6$ of 76 = 38 (N) · $3/6$ of 68 = 34 (C) · $2/8$ of 52 = 13 (K) · $1/2$ of 72 = 36 (O) · $3/5$ of 45 = 27 (A) · $1/3$ of 72 = 24 (E)

Clue 2 (Bar model word problems): "USES RIGHT HAND FOR MIC"

One group collected 54 soccer balls and another group collected 3 soccer balls. How many soccer balls in all? = 57 (U) · There were 78 microphones in all. 26 microphones were used. How many microphones are left? = 52 (H) · One group collected 42 glow sticks and another group collected 97 glow sticks. How many glow sticks in all? = 139 (G) · Stadium DJ has 2 times as many vuvuzelas as a teammate. The teammate has 6 vuvuzelas. How many vuvuzelas does stadium DJ have? = 12 (E) · There were 109 stadium tickets in all. 13 stadium tickets were used. How many stadium tickets are left? = 96 (I) · One group collected 86 soccer balls and another group collected 36 soccer balls. How many soccer balls in all? = 122 (S) · Stadium DJ has 11 times as many vuvuzelas as a teammate. The teammate has 7 vuvuzelas. How many vuvuzelas does stadium DJ have? = 77 (R)

Clue 3 (Multi-step word problems): "Distracted by Confetti Cannon"

There were 267 soccer balls in all. 15 soccer balls were set aside. The rest were shared equally among 3 Opening Ceremony Crew. How many soccer balls did each get? = 84 (D) · There were 160 microphones in all. 2 Opening Ceremony Crew used 12 microphones each. The other 4 Opening Ceremony Crew shared the rest equally. How many microphones did each of the other Opening Ceremony Crew get? = 34 (C) · Stadium DJ collected 22 vuvuzelas in the morning and 20 vuvuzelas in the afternoon, then split them equally among 2 Opening Ceremony Crew. How many vuvuzelas did each get? = 21 (I) · There were 201 microphones in all. 19 microphones were set aside. The rest were shared equally among 7 Opening Ceremony Crew. How many microphones did each get? = 26 (T) · There were 432 soccer balls in all. 40 soccer balls were set aside. The rest were shared equally among 7 Opening Ceremony Crew. How many soccer balls did each get? = 56 (A) · Stadium DJ collected 53 vuvuzelas in the morning and 19 vuvuzelas in the afternoon, then split them equally among 2 Opening Ceremony Crew. How many vuvuzelas did each get? = 36 (S) · There were 207 vuvuzelas in all. 1 Opening Ceremony Crew used 21 vuvuzelas each. The other 6 Opening Ceremony Crew shared the rest equally. How many vuvuzelas did each of the other Opening Ceremony Crew get? = 31 (R)

Clue 4 (Order of operations): "GOLDEN SPIKY STRANDS WERE ON THE HEADSET"

$13 + 6 \times 4 = 37$ (G) · $7 \times 7 - 30 = 19$ (O) · $11 + 3 \times 4 = 23$ (W) · $3 \times 9 - 2 = 25$ (K) · $10 \times 6 - 15 = 45$ (R) · $8 \times 7 - 15 = 41$ (D) · $7 \times 12 - 19 = 65$ (E) · $11 \times 3 - 25 = 8$ (T) · $7 \times 12 - 12 = 72$ (H) · $29 + 5 \times 7 = 64$ (L) · $4 + 3 \times 3 = 13$ (S) · $41 + 5 \times 5 = 66$ (P) · $3 \times 8 - 8 = 16$ (Y) · $15 + 3 \times 7 = 36$ (N) · $15 + 6 \times 4 = 39$ (I) · $6 \times 11 - 23 = 43$ (A)

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

$4 + \underline{\quad} = 8 = 4$ · $35 + \underline{\quad} = 41 = 6$ · $23 + \underline{\quad} = 24 = 1$ · $36 + \underline{\quad} = 47 = 11$ · $25 + \underline{\quad} = 27 = 2$ · $17 + \underline{\quad} = 25 = 8$ · $29 + \underline{\quad} = 41 = 12$ · $36 + \underline{\quad} = 43 = 7$ · $17 + \underline{\quad} = 26 = 9$ · $29 + \underline{\quad} = 34 = 5$ · $25 + \underline{\quad} = 35 = 10$