The Great Meme Lab Mystery

Grade 10 math · Pythagorean theorem, Multi-step word problems, Word problems, Bar models, Square roots · Reading level grades 7-9

Detective: _____ **Date:** _____

Someone crashed the live stream and stole the golden play button right before the grand viral reveal! The studio security cameras picked up a few bizarre moves, but the culprit blended right in with the streamer crew. Solve the math clues to figure out who took the prize.

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 Clout Thief is _____

Possible suspects

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

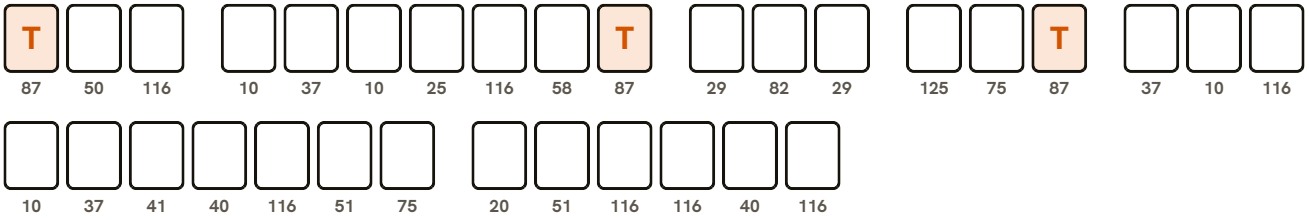
NAME	MEME POWER	AURA MOVE	DOMINANT HAND	HAIRSTYLE	KRYPTONITE
Lacy	Grimace Blast	Over9000 Aura	Left-Handed	Broccoli Cut	Grammar Check
Valkyrae	Infinite Rizz	Over9000 Aura	Left-Handed	Buzz Cut	Boomer Jokes
Ninja	Skibidi Spin	Speed Dash	Right-Handed	Buzz Cut	Grammar Check
Kai	Grimace Blast	Subzero Freeze	Left-Handed	Buzz Cut	Grammar Check
Caseoh	Grimace Blast	Speed Dash	Left-Handed	Buzz Cut	Grammar Check
Pokimane	Mewing Streak	Sigma Stare	Left-Handed	Buzz Cut	No Wi-Fi
Adin	Fanum Taxing	Over9000 Aura	Left-Handed	Buzz Cut	Grammar Check
Shroud	Grimace Blast	Over9000 Aura	Left-Handed	Buzz Cut	No Wi-Fi
Jynxzi	Grimace Blast	Subzero Freeze	Right-Handed	Broccoli Cut	Grammar Check
Hasan	Infinite Rizz	Speed Dash	Left-Handed	Buzz Cut	Grammar Check
Extraemily	Mewing Streak	Subzero Freeze	Right-Handed	Slicked Back	Boomer Jokes
Tarik	Skibidi Spin	Speed Dash	Right-Handed	Slicked Back	Grammar Check
Duke	Mewing Streak	Speed Dash	Left-Handed	Buzz Cut	Grammar Check
Sketch	Grimace Blast	Speed Dash	Left-Handed	Broccoli Cut	No Wi-Fi
Mongraal	Mewing Streak	Subzero Freeze	Left-Handed	Broccoli Cut	Boomer Jokes
Timmy	Infinite Rizz	GigaChad Pose	Right-Handed	Broccoli Cut	No Wi-Fi
Clix	Mewing Streak	Subzero Freeze	Left-Handed	Broccoli Cut	Grammar Check
Ron	Fanum Taxing	Speed Dash	Right-Handed	Buzz Cut	No Wi-Fi
Tfue	Skibidi Spin	GigaChad Pose	Left-Handed	Broccoli Cut	No Wi-Fi
Speed	Mewing Streak	GigaChad Pose	Left-Handed	Buzz Cut	Boomer Jokes
Ray	Skibidi Spin	Over9000 Aura	Right-Handed	Buzz Cut	Grammar Check

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CLUE 1 Pythagorean theorem

To decode the first clue, compare the bar model representing streamer view counts on the live monitor.

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



legs 60 and 63, hypotenuse = ☐ → T

legs 80 and 84, hypotenuse = ☐ → E

legs 21 and 72, hypotenuse = ☐ → O

legs 6 and 8, hypotenuse = ☐ → S

legs 35 and 120, hypotenuse = ☐ → N

legs 12 and 35, hypotenuse = ☐ → U

legs 20 and 21, hypotenuse = ☐ → D

legs 18 and 80, hypotenuse = ☐ → I

legs 15 and 20, hypotenuse = ☐ → P

legs 12 and 16, hypotenuse = ☐ → F

legs 24 and 45, hypotenuse = ☐ → R

legs 30 and 40, hypotenuse = ☐ → H

legs 24 and 32, hypotenuse = ☐ → Z

legs 40 and 42, hypotenuse = ☐ → C

legs 9 and 40, hypotenuse = ☐ → B

Scratch space:

CLUE 2 Multi-step word problems

Next, solve this multi-step breakdown of clout points earned during the charity marathon.

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

A witness saw the villain was

L							D		D
81	79	61	36	24	71	39		79	

.

Streamer earned 5 keyboards in each of 4 rounds, plus 74 bonus keyboards. Then 13 keyboards were lost. How many keyboards are left?

Answer: ☐ → **L**

Streamer collected 79 headphones in the morning and 41 headphones in the afternoon, then split them equally among 5 Esports Squad. How many headphones did each get?

Answer: ☐ → **H**

Streamer collected 122 subscribers in the morning and 91 subscribers in the afternoon, then split them equally among 3 Esports Squad. How many subscribers did each get?

Answer: ☐ → **A**

There were 81 energy drinks in all. 1 Esports Squad used 9 energy drinks each. The other 2 Esports Squad shared the rest equally. How many energy drinks did each of the other Esports Squad get?

Answer: ☐ → **T**

There were 398 keyboards in all. 8 keyboards were set aside. The rest were shared equally among 10 Esports Squad. How many keyboards did each get?

Answer: ☐ → **N**

Streamer collected 173 headphones in the morning and 222 headphones in the afternoon, then split them equally among 5 Esports Squad. How many headphones did each get?

Answer: ☐ → **E**

Streamer collected 263 headphones in the morning and 42 headphones in the afternoon, then split them equally among 5 Esports Squad. How many headphones did each get?

Answer: ☐ → **F**

Scratch space:

CLUE 3 Word problems

A quick calculation of chat donations will reveal the third secret piece of evidence.

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

Someone scared the villain off with

G											K
22	16	93	111	111	93	16	45	84	44	45	

.

Streamer lined up 2 rows of 11 light sticks. How many light sticks in all?

Answer: ☐ → G

Streamer found 70 headphones yesterday and 23 more today. How many headphones in all?

Answer: ☐ → A

Streamer found 43 energy drinks yesterday and 41 more today. How many energy drinks in all?

Answer: ☐ → H

Streamer found 14 subscribers yesterday and 2 more today. How many subscribers in all?

Answer: ☐ → R

Streamer lined up 11 rows of 4 energy drinks. How many energy drinks in all?

Answer: ☐ → E

There were 145 keyboards. 34 were used up. How many keyboards are left?

Answer: ☐ → M

Streamer lined up 9 rows of 5 headphones. How many headphones in all?

Answer: ☐ → C

Scratch space:

CLUE 4 Bar model word problems

Calculate the direct diagonal distance across the sound stage using the Pythagorean theorem.

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

A strand of

B						
68	141	7	7	95	141	10

hair turned up at the scene.

There were 103 headphones in all. 35 headphones were used. How many headphones are left?

draw a bar model

Answer: ☐ → B

There were 47 energy drinks in all. 37 energy drinks were used. How many energy drinks are left?

draw a bar model

Answer: ☐ → T

Streamer used 1/3 of the energy drinks on the first day. The other 94 energy drinks were used the next day. How many energy drinks were there in all?

draw a bar model

Answer: ☐ → U

Streamer shares 190 keyboards equally among 2 teams. How many keyboards does each team get?

draw a bar model

Answer: ☐ → C

There were 23 energy drinks in all. 16 energy drinks were used. How many energy drinks are left?

draw a bar model

Answer: ☐ → Z

CLUE 5 Square roots - the last clue

> Finally, find the side length of the square server rack array by taking its square root.

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:

sqrt(100) = ☐ sqrt(4) = ☐ sqrt(121) = ☐ sqrt(25) = ☐ sqrt(36) = ☐

sqrt(16) = ☐ sqrt(81) = ☐ sqrt(49) = ☐ sqrt(64) = ☐ sqrt(9) = ☐

sqrt(144) = ☐

Step 2 - cross out the sentence with each answer:

1. The villain activated infinite rizz, then executed a speed dash.
2. The villain started a mewing streak, then executed a speed dash.
3. The villain demanded a fanum tax, then struck a gigachad pose.
4. The villain started a mewing streak, then channeled a subzero freeze.
5. The villain started a mewing streak, then flashed an over9000 aura.
6. The villain started a mewing streak, then struck a gigachad pose.
7. The villain demanded a fanum tax, then held a sigma stare.
8. The villain activated infinite rizz, then struck a gigachad pose.
9. The villain performed a skibidi spin, then held a sigma stare.
10. The villain launched a grimace blast, then executed a speed dash.
11. The villain demanded a fanum tax, then flashed an over9000 aura.
12. The villain started a mewing streak, then held a sigma stare.

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TEACHER / PARENT

Answer Key

The Great Meme Lab Mystery

Culprit: Hasan

Infinite Rizz · Speed Dash · Left-Handed · Buzz Cut · Grammar Check

Trail: Start 21 → Clue 1 16 → Clue 2 11 → Clue 3 5 → Clue 4 4 → Clue 5 1

Clue 1 (Pythagorean theorem): "THE SUSPECT DID NOT USE SUBZERO FREEZE"

legs 60 and 63, hypotenuse = 87 (T) · legs 80 and 84, hypotenuse = 116 (E) · legs 21 and 72, hypotenuse = 75 (O) · legs 6 and 8, hypotenuse = 10 (S) · legs 35 and 120, hypotenuse = 125 (N) · legs 12 and 35, hypotenuse = 37 (U) · legs 20 and 21, hypotenuse = 29 (D) · legs 18 and 80, hypotenuse = 82 (I) · legs 15 and 20, hypotenuse = 25 (P) · legs 12 and 16, hypotenuse = 20 (F) · legs 24 and 45, hypotenuse = 51 (R) · legs 30 and 40, hypotenuse = 50 (H) · legs 24 and 32, hypotenuse = 40 (Z) · legs 40 and 42, hypotenuse = 58 (C) · legs 9 and 40, hypotenuse = 41 (B)

Clue 2 (Multi-step word problems): "LEFT HANDED"

Streamer earned 5 keyboards in each of 4 rounds, plus 74 bonus keyboards. Then 13 keyboards were lost. How many keyboards are left? = 81 (L) · Streamer collected 79 headphones in the morning and 41 headphones in the afternoon, then split them equally among 5 Esports Squad. How many headphones did each get? = 24 (H) · Streamer collected 122 subscribers in the morning and 91 subscribers in the afternoon, then split them equally among 3 Esports Squad. How many subscribers did each get? = 71 (A) · There were 81 energy drinks in all. 1 Esports Squad used 9 energy drinks each. The other 2 Esports Squad shared the rest equally. How many energy drinks did each of the other Esports Squad get? = 36 (T) · There were 398 keyboards in all. 8 keyboards were set aside. The rest were shared equally among 10 Esports Squad. How many keyboards did each get? = 39 (N) · Streamer collected 173 headphones in the morning and 222 headphones in the afternoon, then split them equally among 5 Esports Squad. How many headphones did each get? = 79 (E) · Streamer collected 263 headphones in the morning and 42 headphones in the afternoon, then split them equally among 5 Esports Squad. How many headphones did each get? = 61 (F)

Clue 3 (Word problems): "GRAMMAR CHECK"

Streamer lined up 2 rows of 11 light sticks. How many light sticks in all? = 22 (G) · Streamer found 70 headphones yesterday and 23 more today. How many headphones in all? = 93 (A) · Streamer found 43 energy drinks yesterday and 41 more today. How many energy drinks in all? = 84 (H) · Streamer found 14 subscribers yesterday and 2 more today. How many subscribers in all? = 16 (R) · Streamer lined up 11 rows of 4 energy drinks. How many energy drinks in all? = 44 (E) · There were 145 keyboards. 34 were used up. How many keyboards are left? = 111 (M) · Streamer lined up 9 rows of 5 headphones. How many headphones in all? = 45 (C)

Clue 4 (Bar model word problems): "BUZZ CUT"

There were 103 headphones in all. 35 headphones were used. How many headphones are left? = 68 (B) · There were 47 energy drinks in all. 37 energy drinks were used. How many energy drinks are left? = 10 (T) · Streamer used 1/3 of the energy drinks on the first day. The other 94 energy drinks were used the next day. How many energy drinks were there in all? = 141 (U) · Streamer shares 190 keyboards equally among 2 teams. How many keyboards does each team get? = 95 (C) · There were 23 energy drinks in all. 16 energy drinks were used. How many energy drinks are left? = 7 (Z)

Clue 5 (Square roots): surviving statement is box 1 → Hasan

sqrt(100) = 10 · sqrt(4) = 2 · sqrt(121) = 11 · sqrt(25) = 5 · sqrt(36) = 6 · sqrt(16) = 4 · sqrt(81) = 9 · sqrt(49) = 7 · sqrt(64) = 8 · sqrt(9) = 3 · sqrt(144) = 12