



The Case of the Missing Championship Trophy

Grade 9 math · Two-step equations, Exponents, Square roots, Integers · Reading level grades 5-6

Detective: _____ Date: _____

Right before the final buzzer of the city championship, the golden trophy disappeared from the center court display! The arena security team locked the doors and gathered twenty-four star athletes and staff for questioning. Inspect the clues to catch the court-side 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 Championship Snatcher is _____

Possible suspects

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

NAME	SIGNATURE MOVE	COURT GEAR	SHOOTING HAND	HAIRSTYLE	DISTRACTION
Anthony Edwards	No Look Pass	Weighted Vest	Left Handed Shooter	Buzz Cut	Squeaky Sneakers
Trae Young	Sky Hook	Neon High Tops	Left Handed Shooter	Braided Cornrows	Squeaky Sneakers
Shai Alexander	Fastbreak Slam	Grip Gloves	Right Handed Shooter	Buzz Cut	Loud Whistle
Karl Towns	Halfcourt Swish	Arm Sleeve	Right Handed Shooter	Buzz Cut	Squeaky Sneakers
Bam Adebayo	Ankle Breaker	Grip Gloves	Right Handed Shooter	Buzz Cut	Squeaky Sneakers
Donovan Mitchell	Ankle Breaker	Weighted Vest	Left Handed Shooter	Braided Cornrows	Squeaky Sneakers
Ja Morant	Ankle Breaker	Arm Sleeve	Left Handed Shooter	Braided Cornrows	Squeaky Sneakers
Jalen Brunson	Sky Hook	Neon High Tops	Right Handed Shooter	Braided Cornrows	Loud Whistle
Tyrese Haliburton	Halfcourt Swish	Weighted Vest	Left Handed Shooter	Braided Cornrows	Loud Whistle
Giannis Antetokounmpo	Ankle Breaker	Weighted Vest	Right Handed Shooter	Braided Cornrows	Bright Flashbulb
Devin Booker	Ankle Breaker	Grip Gloves	Left Handed Shooter	Buzz Cut	Squeaky Sneakers
Kyrie Irving	Fastbreak Slam	Grip Gloves	Right Handed Shooter	Braided Cornrows	Squeaky Sneakers
Luka Doncic	Fastbreak Slam	Padded Headband	Left Handed Shooter	Braided Cornrows	Squeaky Sneakers
Joel Embiid	Sky Hook	Weighted Vest	Right Handed Shooter	Buzz Cut	Loud Whistle
DeAaron Fox	Ankle Breaker	Weighted Vest	Left Handed Shooter	Braided Cornrows	Loud Whistle
Jayson Tatum	No Look Pass	Weighted Vest	Left Handed Shooter	Braided Cornrows	Squeaky Sneakers
Damian Lillard	Sky Hook	Neon High Tops	Left Handed Shooter	Braided Cornrows	Bright Flashbulb
LeBron James	Halfcourt Swish	Grip Gloves	Left Handed Shooter	Curly High Top	Loud Whistle
Kevin Durant	No Look Pass	Weighted Vest	Left Handed Shooter	Buzz Cut	Loud Whistle
Domantas Sabonis	Ankle Breaker	Grip Gloves	Left Handed Shooter	Curly High Top	Bright Flashbulb
Steph Curry	No Look Pass	Weighted Vest	Right Handed Shooter	Braided Cornrows	Squeaky Sneakers

CLUE 1

Two-step equations

The referee digital scoreboard was tampered with during warmups. Solve this two step equation to reveal the missing baseline tally.

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

T																	T	
5	21	20	4	13	8	8	22	13	12	15	19	20	2	12	19	5		
16	20	22	3	22	6	22	15	15	20	15	21	20	22	15	7	22	12	15

$8x + 3 = 43, x = \square \rightarrow \boxed{\text{T}}$

$7x + 1 = 43, x = \square \rightarrow \boxed{\text{P}}$

$5x + 10 = 90, x = \square \rightarrow \boxed{\text{W}}$

$5x + 12 = 22, x = \square \rightarrow \boxed{\text{S}}$

$8x + 6 = 126, x = \square \rightarrow \boxed{\text{D}}$

$2x + 6 = 48, x = \square \rightarrow \boxed{\text{H}}$

$9x + 4 = 184, x = \square \rightarrow \boxed{\text{E}}$

$2x + 1 = 17, x = \square \rightarrow \boxed{\text{L}}$

$5x + 10 = 70, x = \square \rightarrow \boxed{\text{N}}$

$7x + 5 = 159, x = \square \rightarrow \boxed{\text{A}}$

$3x + 3 = 24, x = \square \rightarrow \boxed{\text{B}}$

$9x + 9 = 180, x = \square \rightarrow \boxed{\text{O}}$

$4x + 1 = 17, x = \square \rightarrow \boxed{\text{V}}$

$7x + 3 = 94, x = \square \rightarrow \boxed{\text{I}}$

$3x + 7 = 16, x = \square \rightarrow \boxed{\text{R}}$

Scratch space:

CLUE 2 Exponents

The arena sound system multiplied its volume exponentially after each buzzer. Work out the exponent problem to find the stadium noise level.

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

S								S											
361	32	128	100	343	225	512	121	361	289	196	289	243	32	25	512				
								S											
125	289	64	400	32	400	361	125	625	625	512	32	343	289	512	128	625	100	343	512

$19^2 = \square \rightarrow$ S	$14^2 = \square \rightarrow$ W	$5^2 = \square \rightarrow$ F	$7^3 = \square \rightarrow$ R
$17^2 = \square \rightarrow$ A	$3^5 = \square \rightarrow$ L	$2^7 = \square \rightarrow$ C	$2^5 = \square \rightarrow$ E
$8^3 = \square \rightarrow$ T	$5^3 = \square \rightarrow$ H	$11^2 = \square \rightarrow$ Y	$15^2 = \square \rightarrow$ I
$5^4 = \square \rightarrow$ O	$2^6 = \square \rightarrow$ N	$20^2 = \square \rightarrow$ D	$10^2 = \square \rightarrow$ U

Scratch space:

CLUE 3 Square roots

The mystery culprit hid behind a perfectly square practice mat near the bench. Calculate the square root of the mat area to locate the spot.

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

S							S								S
9	2	19	7	21	20	10	9	16	7	21	20	7	4	9	

		S																	
6	14	9	22	4	21	23	22	7	6	22	13	7	17	14	5	5	21	14	16

$\sqrt{81} = \square \rightarrow$ S	$\sqrt{196} = \square \rightarrow$ I	$\sqrt{400} = \square \rightarrow$ K
$\sqrt{25} = \square \rightarrow$ L	$\sqrt{361} = \square \rightarrow$ U	$\sqrt{484} = \square \rightarrow$ T
$\sqrt{256} = \square \rightarrow$ N	$\sqrt{441} = \square \rightarrow$ A	$\sqrt{289} = \square \rightarrow$ V
$\sqrt{36} = \square \rightarrow$ D	$\sqrt{4} = \square \rightarrow$ Q	$\sqrt{169} = \square \rightarrow$ H
$\sqrt{529} = \square \rightarrow$ C	$\sqrt{100} = \square \rightarrow$ Y	$\sqrt{16} = \square \rightarrow$ R
$\sqrt{49} = \square \rightarrow$ E		

Scratch space:

CLUE 4 Integers

The coach tracked team point differentials with positive and negative values across four quarters. Solve the integer equation to find the net score.

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

D														D
5	19	32	19	17	32	25	24	19	38	35	33	20	40	5

				D		D													
21	6	4	25	5	19	5	17	33	6	40	6	33	18	38	37	4	25	6	

$$(-10) + 15 = \boxed{} \rightarrow \boxed{\text{D}}$$

$$(-4) + 22 = \boxed{} \rightarrow \boxed{\text{W}}$$

$$9 - (-8) = \boxed{} \rightarrow \boxed{\text{C}}$$

$$(-5) + 29 = \boxed{} \rightarrow \boxed{\text{V}}$$

$$(-13) + 53 = \boxed{} \rightarrow \boxed{\text{N}}$$

$$18 - (-2) = \boxed{} \rightarrow \boxed{\text{U}}$$

$$27 - (-6) = \boxed{} \rightarrow \boxed{\text{O}}$$

$$32 - (-5) = \boxed{} \rightarrow \boxed{\text{H}}$$

$$(-13) + 19 = \boxed{} \rightarrow \boxed{\text{R}}$$

$$27 - (-5) = \boxed{} \rightarrow \boxed{\text{T}}$$

$$(-14) + 18 = \boxed{} \rightarrow \boxed{\text{A}}$$

$$29 - (-9) = \boxed{} \rightarrow \boxed{\text{S}}$$

$$28 - (-7) = \boxed{} \rightarrow \boxed{\text{F}}$$

$$(-4) + 25 = \boxed{} \rightarrow \boxed{\text{B}}$$

$$12 - (-13) = \boxed{} \rightarrow \boxed{\text{I}}$$

$$12 - (-7) = \boxed{} \rightarrow \boxed{\text{E}}$$

Scratch space:

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

The official stat keeper needs to balance total fastbreak points and team fouls. Solve the final two step equation to unlock the case locker.

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:

$5x + 12 = 42, x = \boxed{}$

$9x + 6 = 114, x = \boxed{}$

$9x + 6 = 33, x = \boxed{}$

$6x + 3 = 57, x = \boxed{}$

$7x + 10 = 17, x = \boxed{}$

$9x + 3 = 39, x = \boxed{}$

$7x + 5 = 82, x = \boxed{}$

$7x + 4 = 39, x = \boxed{}$

$3x + 9 = 39, x = \boxed{}$

$3x + 10 = 16, x = \boxed{}$

$6x + 11 = 59, x = \boxed{}$

Step 2 - cross out the sentence with each answer:

1. The villain faked a no look pass, then adjusted a padded headband.
2. The villain faked a no look pass, then laced up neon high tops.
3. The villain executed an ankle breaker, then pulled on an arm sleeve.
4. The villain performed a fastbreak slam, then tightened grip gloves.
5. The villain executed an ankle breaker, then laced up neon high tops.
6. The villain faked a no look pass, then strapped on a weighted vest.
7. The villain executed an ankle breaker, then strapped on a weighted vest.
8. The villain performed a fastbreak slam, then adjusted a padded headband.
9. The villain launched a sky hook, then adjusted a padded headband.
10. The villain executed an ankle breaker, then adjusted a padded headband.
11. The villain faked a no look pass, then tightened grip gloves.
12. The villain launched a sky hook, then laced up neon high tops.

Answer Key

The Case of the Missing Championship Trophy

Culprit: Donovan Mitchell

Ankle Breaker · Weighted Vest · Left Handed Shooter · Braided Cornrows · Squeaky Sneakers

Trail: Start 21 → Clue 1 20 → Clue 2 12 → Clue 3 6 → Clue 4 4 → Clue 5 1

Clue 1 (Two-step equations): "THE VILLAIN DOES NOT WEAR A PADDED HEADBAND"

$8x + 3 = 43$, $x = 5$ (T) · $7x + 1 = 43$, $x = 6$ (P) · $5x + 10 = 90$, $x = 16$ (W) · $5x + 12 = 22$, $x = 2$ (S) · $8x + 6 = 126$, $x = 15$ (D) · $2x + 6 = 48$, $x = 21$ (H) · $9x + 4 = 184$, $x = 20$ (E) · $2x + 1 = 17$, $x = 8$ (L) · $5x + 10 = 70$, $x = 12$ (N) · $7x + 5 = 159$, $x = 22$ (A) · $3x + 3 = 24$, $x = 7$ (B) · $9x + 9 = 180$, $x = 19$ (O) · $4x + 1 = 17$, $x = 4$ (V) · $7x + 3 = 94$, $x = 13$ (I) · $3x + 7 = 16$, $x = 3$ (R)

Clue 2 (Exponents): "SECURITY SAW A LEFT HANDED SHOOTER AT COURT"

$19^2 = 361$ (S) · $14^2 = 196$ (W) · $5^2 = 25$ (F) · $7^3 = 343$ (R) · $17^2 = 289$ (A) · $3^5 = 243$ (L) · $2^7 = 128$ (C) · $2^5 = 32$ (E) · $8^3 = 512$ (T) · $5^3 = 125$ (H) · $11^2 = 121$ (Y) · $15^2 = 225$ (I) · $5^4 = 625$ (O) · $2^6 = 64$ (N) · $20^2 = 400$ (D) · $10^2 = 100$ (U)

Clue 3 (Square roots): "SQUEAKY SNEAKERS DISTRACTED THE VILLAIN"

$\sqrt{81} = 9$ (S) · $\sqrt{196} = 14$ (I) · $\sqrt{400} = 20$ (K) · $\sqrt{25} = 5$ (L) · $\sqrt{361} = 19$ (U) · $\sqrt{484} = 22$ (T) · $\sqrt{256} = 16$ (N) · $\sqrt{441} = 21$ (A) · $\sqrt{289} = 17$ (V) · $\sqrt{36} = 6$ (D) · $\sqrt{4} = 2$ (Q) · $\sqrt{169} = 13$ (H) · $\sqrt{529} = 23$ (C) · $\sqrt{100} = 10$ (Y) · $\sqrt{16} = 4$ (R) · $\sqrt{49} = 7$ (E)

Clue 4 (Integers): "DETECTIVES FOUND BRAIDED CORNROWS HAIR"

$(-10) + 15 = 5$ (D) · $(-4) + 22 = 18$ (W) · $9 - (-8) = 17$ (C) · $(-5) + 29 = 24$ (V) · $(-13) + 53 = 40$ (N) · $18 - (-2) = 20$ (U) · $27 - (-6) = 33$ (O) · $32 - (-5) = 37$ (H) · $(-13) + 19 = 6$ (R) · $27 - (-5) = 32$ (T) · $(-14) + 18 = 4$ (A) · $29 - (-9) = 38$ (S) · $28 - (-7) = 35$ (F) · $(-4) + 25 = 21$ (B) · $12 - (-13) = 25$ (I) · $12 - (-7) = 19$ (E)

Clue 5 (Two-step equations): surviving statement is box 7 → Donovan Mitchell

$5x + 12 = 42$, $x = 6$ · $9x + 6 = 114$, $x = 12$ · $9x + 6 = 33$, $x = 3$ · $6x + 3 = 57$, $x = 9$ · $7x + 10 = 17$, $x = 1$ · $9x + 3 = 39$, $x = 4$ · $7x + 5 = 82$, $x = 11$ · $7x + 4 = 39$, $x = 5$ · $3x + 9 = 39$, $x = 10$ · $3x + 10 = 16$, $x = 2$ · $6x + 11 = 59$, $x = 8$