The Championship Trophy Heist

Grade 8 math · Exponents, Square roots, Pythagorean theorem, Order of operations, Two-step equations · Reading level grades 7-9

Detective: _____ **Date:** _____

The gold MVP trophy has vanished from the display case right before the buzzer of the championship game. The arena cameras captured a blurry figure in athletic gear fleeing through the tunnel. Solve the basketball data puzzles to reveal the clues, cross-reference the suspect sheet, and recover 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 court crasher is _____

Possible suspects

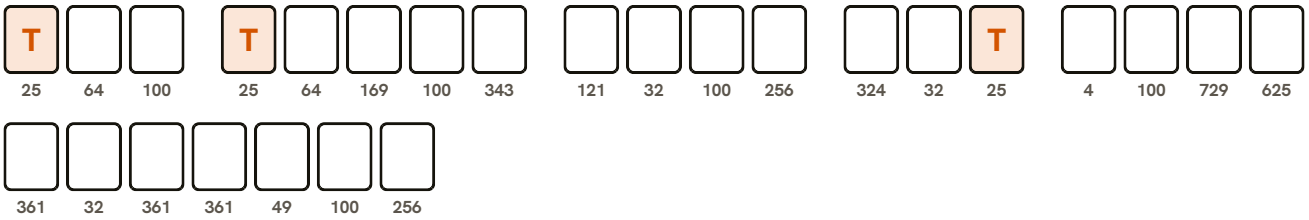
Cross off a row as each clue rules it out. The one left at the end is the culprit.

NAME	SIGNATURE SKILL	SIGNATURE GEAR	SHOOTING HAND	HAIRSTYLE	DEFENSIVE FLAW
Ja Morant	Sharpshooter	Lucky Headband	Right-handed	Crew Cut	Zone Defense
Kyrie Irving	Glass Cleaner	Lucky Headband	Left-handed	Buzz Cut	Full Court Press
Donovan Mitchell	Dunk Master	High-top Shoes	Right-handed	Crew Cut	Full Court Press
Stephen Curry	Glass Cleaner	Ankle Braces	Left-handed	Buzz Cut	Zone Defense
Jaylen Brown	Dunk Master	Sleek Goggles	Right-handed	Buzz Cut	Full Court Press
James Harden	Glass Cleaner	Lucky Headband	Left-handed	Dreadlocks	Full Court Press
Damian Lillard	Glass Cleaner	High-top Shoes	Left-handed	Buzz Cut	Full Court Press
Bam Adebayo	Sharpshooter	Lucky Headband	Left-handed	Dreadlocks	Full Court Press
Trae Young	Sharpshooter	Ankle Braces	Left-handed	Dreadlocks	Zone Defense
Luka Doncic	Rim Protector	Lucky Headband	Right-handed	Buzz Cut	Zone Defense
LeBron James	Playmaker	Ankle Braces	Right-handed	Dreadlocks	Zone Defense
Kawhi Leonard	Glass Cleaner	High-top Shoes	Right-handed	Buzz Cut	Full Court Press
Jimmy Butler	Sharpshooter	Red Wristband	Left-handed	Buzz Cut	Full Court Press
Devin Booker	Sharpshooter	High-top Shoes	Left-handed	Crew Cut	Full Court Press
Jayson Tatum	Playmaker	High-top Shoes	Left-handed	Dreadlocks	Full Court Press
Shai Gilgeous-Alexander	Sharpshooter	Red Wristband	Right-handed	Crew Cut	Full Court Press
Russell Westbrook	Sharpshooter	Ankle Braces	Right-handed	Buzz Cut	Full Court Press
Paul George	Glass Cleaner	Lucky Headband	Left-handed	Crew Cut	Full Court Press
Anthony Davis	Playmaker	Ankle Braces	Right-handed	Buzz Cut	Full Court Press
Joel Embiid	Dunk Master	High-top Shoes	Right-handed	Buzz Cut	Double Team
Kevin Durant	Sharpshooter	Red Wristband	Right-handed	Buzz Cut	Full Court Press

CLUE 1 Exponents

> To map out the security system's bracket-style grid, the coach squares the base power levels of the backup generators.

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



5^2 = ☐ → T

4^3 = ☐ → H

2^5 = ☐ → O

19^2 = ☐ → G

2^2 = ☐ → W

13^2 = ☐ → I

10^2 = ☐ → E

5^4 = ☐ → R

7^3 = ☐ → F

7^2 = ☐ → L

9^3 = ☐ → A

11^2 = ☐ → D

18^2 = ☐ → N

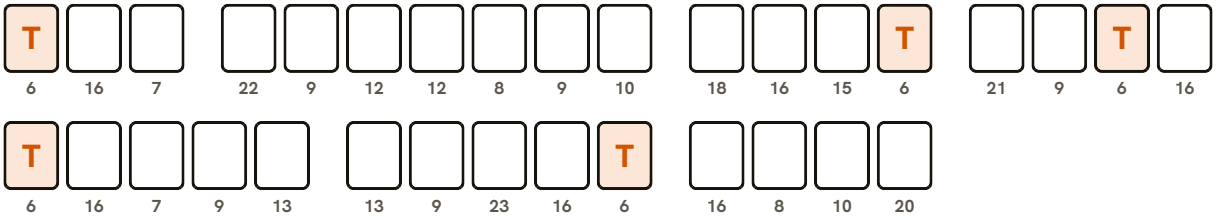
2^8 = ☐ → S

Scratch space:

CLUE 2 Square roots

> The court coordinator needs to find the exact side length of the perfect square key area by finding its root.

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



sqrt(36) = ☐ → T

sqrt(144) = ☐ → L

sqrt(484) = ☐ → V

sqrt(256) = ☐ → H

sqrt(81) = ☐ → I

sqrt(64) = ☐ → A

sqrt(49) = ☐ → E

sqrt(225) = ☐ → O

sqrt(441) = ☐ → W

sqrt(529) = ☐ → G

sqrt(400) = ☐ → D

sqrt(324) = ☐ → S

sqrt(100) = ☐ → N

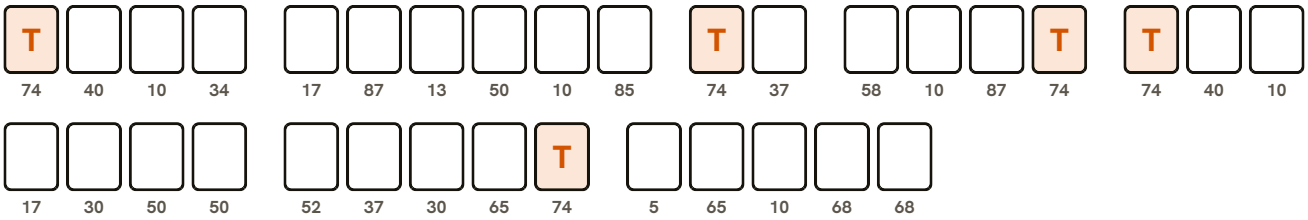
sqrt(169) = ☐ → R

Scratch space:

CLUE 3 Pythagorean theorem

> To calculate the fastest path for a diagonal outlet pass, the team calculates the hypotenuse from the baseline corner to the wing.

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



legs 24 and 70, hypotenuse = ☐ → T

legs 3 and 4, hypotenuse = ☐ → P

legs 40 and 75, hypotenuse = ☐ → D

legs 32 and 60, hypotenuse = ☐ → S

legs 25 and 60, hypotenuse = ☐ → R

legs 18 and 24, hypotenuse = ☐ → U

legs 16 and 30, hypotenuse = ☐ → Y

legs 20 and 48, hypotenuse = ☐ → C

legs 40 and 42, hypotenuse = ☐ → B

legs 8 and 15, hypotenuse = ☐ → F

legs 6 and 8, hypotenuse = ☐ → E

legs 5 and 12, hypotenuse = ☐ → I

legs 12 and 35, hypotenuse = ☐ → O

legs 24 and 32, hypotenuse = ☐ → H

legs 14 and 48, hypotenuse = ☐ → L

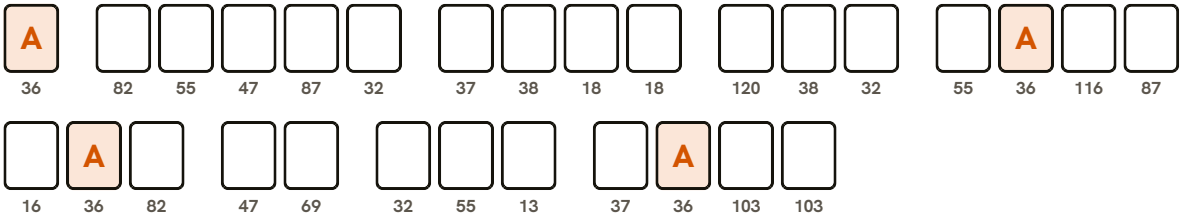
legs 60 and 63, hypotenuse = ☐ → A

Scratch space:

CLUE 4 Order of operations

Analyzing the play-by-play scoring log requires evaluating the bracketed multi-step team efficiency rating first.

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



7 × 9 - 27 = ☐ → A	12 × 7 - 2 = ☐ → S	6 + 6 × 2 = ☐ → Z
92 + 6 × 4 = ☐ → I	5 × 8 - 27 = ☐ → E	9 × 12 - 21 = ☐ → R
3 × 9 - 11 = ☐ → W	10 × 9 - 21 = ☐ → N	27 + 5 × 4 = ☐ → O
3 × 12 - 4 = ☐ → T	7 × 11 - 22 = ☐ → H	40 + 9 × 7 = ☐ → L
12 × 12 - 24 = ☐ → C	9 × 6 - 17 = ☐ → B	7 × 6 - 4 = ☐ → U

Scratch space:

CLUE 5 Two-step equations - the last clue

> The head scout sets up an equation to isolate the exact number of drills needed to hit the target shooting percentage.

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:

$3x + 10 = 19$, $x =$ ☐	$5x + 10 = 30$, $x =$ ☐	$2x + 8 = 20$, $x =$ ☐	$6x + 11 = 77$, $x =$ ☐
$2x + 8 = 12$, $x =$ ☐	$2x + 4 = 28$, $x =$ ☐	$6x + 9 = 15$, $x =$ ☐	$2x + 8 = 28$, $x =$ ☐
$6x + 7 = 37$, $x =$ ☐	$4x + 2 = 30$, $x =$ ☐	$6x + 8 = 62$, $x =$ ☐	

Step 2 - cross out the sentence with each answer:

1. The villain drove hard to the hoop for a layup, then adjusted their lucky headband.
2. The villain drove hard to the hoop for a layup, then cleaned their sleek goggles.
3. The villain grabbed a crucial offensive rebound, then squeaked their high-top shoes on the court.
4. The villain drained a clutch three-pointer, then tightened their red wristband.
5. The villain grabbed a crucial offensive rebound, then cleaned their sleek goggles.
6. The villain dished out a brilliant no-look pass, then strapped on their ankle braces.
7. The villain swatted away a game-winning shot, then adjusted their lucky headband.
8. The villain drained a clutch three-pointer, then strapped on their ankle braces.
9. The villain grabbed a crucial offensive rebound, then strapped on their ankle braces.
10. The villain drove hard to the hoop for a layup, then squeaked their high-top shoes on the court.
11. The villain swatted away a game-winning shot, then cleaned their sleek goggles.
12. The villain drove hard to the hoop for a layup, then tightened their red wristband.

TEACHER / PARENT

Answer Key

The Championship Trophy Heist

Culprit: Russell Westbrook

Sharpshooter · Ankle Braces · Right-handed · Buzz Cut · Full Court Press

Trail: Start 21 → Clue 1 20 → Clue 2 10 → Clue 3 6 → Clue 4 4 → Clue 5 1

Clue 1 (Exponents): "THE THIEF DOES NOT WEAR GOGGLES"

5^2 = 25 (T) · 4^3 = 64 (H) · 2^5 = 32 (O) · 19^2 = 361 (G) · 2^2 = 4 (W) · 13^2 = 169 (I) · 10^2 = 100 (E) · 5^4 = 625 (R) · 7^3 = 343 (F) · 7^2 = 49 (L) · 9^3 = 729 (A) · 11^2 = 121 (D) · 18^2 = 324 (N) · 2^8 = 256 (S)

Clue 2 (Square roots): "THE VILLAIN SHOT WITH THEIR RIGHT HAND"

sqrt(36) = 6 (T) · sqrt(144) = 12 (L) · sqrt(484) = 22 (V) · sqrt(256) = 16 (H) · sqrt(81) = 9 (I) · sqrt(64) = 8 (A) · sqrt(49) = 7 (E) · sqrt(225) = 15 (O) · sqrt(441) = 21 (W) · sqrt(529) = 23 (G) · sqrt(400) = 20 (D) · sqrt(324) = 18 (S) · sqrt(100) = 10 (N) · sqrt(169) = 13 (R)

Clue 3 (Pythagorean theorem): "THEY FAILED TO BEAT THE FULL COURT PRESS"

legs 24 and 70, hypotenuse = 74 (T) · legs 3 and 4, hypotenuse = 5 (P) · legs 40 and 75, hypotenuse = 85 (D) · legs 32 and 60, hypotenuse = 68 (S) · legs 25 and 60, hypotenuse = 65 (R) · legs 18 and 24, hypotenuse = 30 (U) · legs 16 and 30, hypotenuse = 34 (Y) · legs 20 and 48, hypotenuse = 52 (C) · legs 40 and 42, hypotenuse = 58 (B) · legs 8 and 15, hypotenuse = 17 (F) · legs 6 and 8, hypotenuse = 10 (E) · legs 5 and 12, hypotenuse = 13 (I) · legs 12 and 35, hypotenuse = 37 (O) · legs 24 and 32, hypotenuse = 40 (H) · legs 14 and 48, hypotenuse = 50 (L) · legs 60 and 63, hypotenuse = 87 (A)

Clue 4 (Order of operations): "A SHORT BUZZ CUT HAIR WAS ON THE BALL"

7 × 9 - 27 = 36 (A) · 12 × 7 - 2 = 82 (S) · 6 + 6 × 2 = 18 (Z) · 92 + 6 × 4 = 116 (I) · 5 × 8 - 27 = 13 (E) · 9 × 12 - 21 = 87 (R) · 3 × 9 - 11 = 16 (W) · 10 × 9 - 21 = 69 (N) · 27 + 5 × 4 = 47 (O) · 3 × 12 - 4 = 32 (T) · 7 × 11 - 22 = 55 (H) · 40 + 9 × 7 = 103 (L) · 12 × 12 - 24 = 120 (C) · 9 × 6 - 17 = 37 (B) · 7 × 6 - 4 = 38 (U)

Clue 5 (Two-step equations): surviving statement is box 8 → Russell Westbrook

3x + 10 = 19, x = 3 · 5x + 10 = 30, x = 4 · 2x + 8 = 20, x = 6 · 6x + 11 = 77, x = 11 · 2x + 8 = 12, x = 2 · 2x + 4 = 28, x = 12 · 6x + 9 = 15, x = 1 · 2x + 8 = 28, x = 10 · 6x + 7 = 37, x = 5 · 4x + 2 = 30, x = 7 · 6x + 8 = 62, x = 9