



The Case of the Missing Championship Hoop

Grade 6 math · Percentages, Exponents, Order of operations, Multiplication, Division · Reading level grades 5-6

Detective: _____ **Date:** _____

Just hours before the grand finals, someone stole the golden championship rim right off the backboard! The Arena security footage was corrupted by a mysterious signal. As the junior detective on the court, you must use your math skills to decode the clues and find out which player is the secret thief.

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 Hoop Thief 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	SPECIAL GEAR	WRISTBAND ARM	HAIR STYLE	COURT FEAR
James Harden	lightning speed crossover	spring-loaded sneakers	wears left wristband	neon orange mohawk	loud referee whistles
Shai Gilgeous	gravity-defying slam dunk	turbo-boost wristband	wears left wristband	frosted silver tips	shiny polished floors
Joel Embiid	impossible fadeaway shot	spring-loaded sneakers	wears right wristband	buzzed blue waves	shiny polished floors
Kawhi Leonard	full-court buzzer beater	holographic decoy shoes	wears left wristband	neon orange mohawk	loud referee whistles
Domantas Sabonis	gravity-defying slam dunk	spring-loaded sneakers	wears left wristband	frosted silver tips	squeaky sneaker sounds
Stephen Curry	full-court buzzer beater	neon glow basketball	wears right wristband	buzzed blue waves	shiny polished floors
Kyrie Irving	full-court buzzer beater	magnetic grip gloves	wears right wristband	frosted silver tips	shiny polished floors
Luka Doncic	lightning speed crossover	turbo-boost wristband	wears right wristband	neon orange mohawk	squeaky sneaker sounds
Damian Lillard	impossible fadeaway shot	magnetic grip gloves	wears left wristband	frosted silver tips	shiny polished floors
Devin Booker	lightning speed crossover	neon glow basketball	wears left wristband	buzzed blue waves	squeaky sneaker sounds
Ja Morant	full-court buzzer beater	holographic decoy shoes	wears left wristband	buzzed blue waves	squeaky sneaker sounds
Jayson Tatum	impossible fadeaway shot	turbo-boost wristband	wears right wristband	buzzed blue waves	shiny polished floors
Nikola Jokic	gravity-defying slam dunk	spring-loaded sneakers	wears left wristband	buzzed blue waves	squeaky sneaker sounds
Giannis Antetokounmpo	no-look mystery pass	magnetic grip gloves	wears left wristband	buzzed blue waves	loud referee whistles
Donovan Mitchell	full-court buzzer beater	turbo-boost wristband	wears right wristband	buzzed blue waves	squeaky sneaker sounds
Anthony Edwards	full-court buzzer beater	holographic decoy shoes	wears right wristband	buzzed blue waves	shiny polished floors
Anthony Davis	impossible fadeaway shot	neon glow basketball	wears left wristband	buzzed blue waves	squeaky sneaker sounds
Tyrese Haliburton	gravity-defying slam dunk	magnetic grip gloves	wears right wristband	buzzed blue waves	squeaky sneaker sounds
Paul George	gravity-defying slam dunk	magnetic grip gloves	wears right wristband	buzzed blue waves	shiny polished floors
Bam Adebayo	full-court buzzer beater	magnetic grip gloves	wears left wristband	buzzed blue waves	shiny polished floors
Kevin Durant	no-look mystery pass	holographic decoy shoes	wears left wristband	neon orange mohawk	loud referee whistles

CLUE 1 Percentages

The scoreboard is flickering and showing a strange free throw percentage. Figure out the total shots made 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 and positions:

T														T			
31	40	30	43	15	30	21	12	12	41	30	37	21	41	31	24	37	30
40	41	32	41	17	3	38	10	40	15	5	37	40	41	30	37		

5% of 620 = → **T**

40% of 95 = → **A**

5% of 340 = → **G**

$$60\% \text{ of } 25 = \boxed{} \rightarrow \boxed{\text{I}}$$

5% of 820 = →

25% of 96 = → **U**

40% of 25 = $\rightarrow$ **P**

50% of 74 = → **S**

5% of 860 = → **F**

5% of 800 = → **H**

25% of 20 = → **C**

10% of 120 = → **D**

$$75\% \text{ of } 40 = \boxed{} \rightarrow \boxed{\text{E}}$$

$$20\% \text{ of } 160 = \boxed{} \rightarrow \boxed{\text{L}}$$

20% of 105 = →

25% of 12 = $\rightarrow$ **R**

Scratch space:

CLUE 2 Exponents

To reboot the court's main security monitors, we have to calculate the power surges, which grow by exponents.

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

T									T								
49	100	400	128	32	128	324	400	169	49	100	16	9	16	64	16	121	9
		T						T					T				
361	121	49	100	400	343	216	25	100	49	243	343	216	128	49			

$7^2 = \square \rightarrow \text{T}$	$18^2 = \square \rightarrow \text{P}$	$11^2 = \square \rightarrow \text{N}$	$13^2 = \square \rightarrow \text{C}$
$2^5 = \square \rightarrow \text{U}$	$20^2 = \square \rightarrow \text{E}$	$3^5 = \square \rightarrow \text{W}$	$2^6 = \square \rightarrow \text{B}$
$7^3 = \square \rightarrow \text{R}$	$4^2 = \square \rightarrow \text{A}$	$6^3 = \square \rightarrow \text{I}$	$2^7 = \square \rightarrow \text{S}$
$19^2 = \square \rightarrow \text{O}$	$5^2 = \square \rightarrow \text{G}$	$10^2 = \square \rightarrow \text{H}$	$3^2 = \square \rightarrow \text{D}$

Scratch space:

CLUE 3
Order of operations

The team playbook has a secret lock on it. Follow the strict order of operations to solve the equation and open the playbook.

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

S								S												S
32	50	9	13	13	67	80	15	32	44	9	35	15	77	50	38	38	80	32		

S													
32	50	38	39	67	64	45	44	67	48	64	38	39	35

$20 + 4 \times 3 = \square \rightarrow$ S	$10 \times 6 - 15 = \square \rightarrow$ T	$7 \times 12 - 20 = \square \rightarrow$ D
$3 \times 11 - 18 = \square \rightarrow$ Y	$11 \times 4 - 6 = \square \rightarrow$ O	$3 + 5 \times 9 = \square \rightarrow$ M
$56 + 3 \times 8 = \square \rightarrow$ R	$9 \times 2 - 9 = \square \rightarrow$ I	$1 + 2 \times 6 = \square \rightarrow$ P
$9 \times 6 - 15 = \square \rightarrow$ W	$35 + 8 \times 4 = \square \rightarrow$ E	$5 \times 12 - 25 = \square \rightarrow$ N
$8 \times 12 - 19 = \square \rightarrow$ F	$7 \times 9 - 13 = \square \rightarrow$ L	$7 \times 10 - 26 = \square \rightarrow$ H

Scratch space:

CLUE 4
Multiplication facts (1-12)

The equipment manager has jerseys stacked in equal rows. Multiply the columns by the rows to get the total count and find the next lead.

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

B				B												
96	16	20	28	96	20	36	36	28	80	40	27	90	48	30	27	22
22	144	72	64	64	28	80	27	64	64	40	28	88	77	100		

$12 \times 8 = \square \rightarrow$ B	$9 \times 3 = \square \rightarrow$ A	$4 \times 12 = \square \rightarrow$ R
$11 \times 7 = \square \rightarrow$ Y	$8 \times 8 = \square \rightarrow$ T	$10 \times 10 = \square \rightarrow$ M
$8 \times 9 = \square \rightarrow$ O	$12 \times 12 = \square \rightarrow$ P	$5 \times 6 = \square \rightarrow$ W
$2 \times 8 = \square \rightarrow$ L	$9 \times 10 = \square \rightarrow$ I	$2 \times 11 = \square \rightarrow$ S
$4 \times 5 = \square \rightarrow$ U	$8 \times 5 = \square \rightarrow$ H	$12 \times 3 = \square \rightarrow$ Z
$8 \times 11 = \square \rightarrow$ G	$7 \times 4 = \square \rightarrow$ E	$10 \times 8 = \square \rightarrow$ D

Scratch space:

CLUE 5**Division facts (1-12) - the last clue**

We need to distribute the practice basketballs equally among all the team carts. Work out the division to find the final piece of evidence.

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:

$10 \div 1 = \boxed{}$

$80 \div 10 = \boxed{}$

$12 \div 6 = \boxed{}$

$60 \div 10 = \boxed{}$

$50 \div 10 = \boxed{}$

$63 \div 9 = \boxed{}$

$22 \div 2 = \boxed{}$

$132 \div 11 = \boxed{}$

$36 \div 4 = \boxed{}$

$32 \div 8 = \boxed{}$

$9 \div 9 = \boxed{}$

Step 2 - cross out the sentence with each answer:

1. The villain fakes everyone out with a lightning speed crossover, then speeds away using a turbo-boost wristband.
2. The villain sinks a wild full-court buzzer beater, then lights up the arena with a neon glow basketball.
3. The villain scores with an impossible fadeaway shot, then leaps over the defense in spring-loaded sneakers.
4. The villain fakes everyone out with a lightning speed crossover, then leaps over the defense in spring-loaded sneakers.
5. The villain sinks a wild full-court buzzer beater, then leaps over the defense in spring-loaded sneakers.
6. The villain throws a sneaky no-look mystery pass, then lights up the arena with a neon glow basketball.
7. The villain fakes everyone out with a lightning speed crossover, then lights up the arena with a neon glow basketball.
8. The villain scores with an impossible fadeaway shot, then speeds away using a turbo-boost wristband.
9. The villain throws a sneaky no-look mystery pass, then speeds away using a turbo-boost wristband.
10. The villain unleashes a gravity-defying slam dunk, then catches the ball with magnetic grip gloves.
11. The villain sinks a wild full-court buzzer beater, then speeds away using a turbo-boost wristband.
12. The villain throws a sneaky no-look mystery pass, then catches the ball with magnetic grip gloves.

Answer Key

The Case of the Missing Championship Hoop

Culprit: Joel Embiid

impossible fadeaway shot · spring-loaded sneakers · wears right wristband · buzzed blue waves · shiny polished floors

Trail: Start 21 → Clue 1 17 → Clue 2 8 → Clue 3 5 → Clue 4 4 → Clue 5 1

Clue 1 (Percentages): "THE FIEND DOES NOT USE HOLOGRAPHIC SHOES"

5% of 620 = 31 (T) · 40% of 95 = 38 (A) · 5% of 340 = 17 (G) · 60% of 25 = 15 (I) · 5% of 820 = 41 (O) · 25% of 96 = 24 (U) · 40% of 25 = 10 (P) · 50% of 74 = 37 (S) · 5% of 860 = 43 (F) · 5% of 800 = 40 (H) · 25% of 20 = 5 (C) · 10% of 120 = 12 (D) · 75% of 40 = 30 (E) · 20% of 160 = 32 (L) · 20% of 105 = 21 (N) · 25% of 12 = 3 (R)

Clue 2 (Exponents): "THE SUSPECT HAD A BAND ON THE RIGHT WRIST"

$7^2 = 49$ (T) · $18^2 = 324$ (P) · $11^2 = 121$ (N) · $13^2 = 169$ (C) · $2^5 = 32$ (U) · $20^2 = 400$ (E) · $3^5 = 243$ (W) · $2^6 = 64$ (B) · $7^3 = 343$ (R) · $4^2 = 16$ (A) · $6^3 = 216$ (I) · $2^7 = 128$ (S) · $19^2 = 361$ (O) · $5^2 = 25$ (G) · $10^2 = 100$ (H) · $3^2 = 9$ (D)

Clue 3 (Order of operations): "SLIPPERY SHINY FLOORS SLOWED THEM DOWN"

$20 + 4 \times 3 = 32$ (S) · $10 \times 6 - 15 = 45$ (T) · $7 \times 12 - 20 = 64$ (D) · $3 \times 11 - 18 = 15$ (Y) · $11 \times 4 - 6 = 38$ (O) · $3 + 5 \times 9 = 48$ (M) · $56 + 3 \times 8 = 80$ (R) · $9 \times 2 - 9 = 9$ (I) · $1 + 2 \times 6 = 13$ (P) · $9 \times 6 - 15 = 39$ (W) · $35 + 8 \times 4 = 67$ (E) · $5 \times 12 - 25 = 35$ (N) · $8 \times 12 - 19 = 77$ (F) · $7 \times 9 - 13 = 50$ (L) · $7 \times 10 - 26 = 44$ (H)

Clue 4 (Multiplication facts (1-12)): "BLUE BUZZED HAIR WAS SPOTTED AT THE GYM"

$12 \times 8 = 96$ (B) · $9 \times 3 = 27$ (A) · $4 \times 12 = 48$ (R) · $11 \times 7 = 77$ (Y) · $8 \times 8 = 64$ (T) · $10 \times 10 = 100$ (M) · $8 \times 9 = 72$ (O) · $12 \times 12 = 144$ (P) · $5 \times 6 = 30$ (W) · $2 \times 8 = 16$ (L) · $9 \times 10 = 90$ (I) · $2 \times 11 = 22$ (S) · $4 \times 5 = 20$ (U) · $8 \times 5 = 40$ (H) · $12 \times 3 = 36$ (Z) · $8 \times 11 = 88$ (G) · $7 \times 4 = 28$ (E) · $10 \times 8 = 80$ (D)

Clue 5 (Division facts (1-12)): surviving statement is box 3 → Joel Embiid

$10 \div 1 = 10$ · $80 \div 10 = 8$ · $12 \div 6 = 2$ · $60 \div 10 = 6$ · $50 \div 10 = 5$ · $63 \div 9 = 7$ · $22 \div 2 = 11$ · $132 \div 11 = 12$ · $36 \div 4 = 9$ · $32 \div 8 = 4$ · $9 \div 9 = 1$