



The Case of the Missing MVP Trophies

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

Detective: _____ Date: _____

Just hours before the ultimate Soccer-Basketball crossover championship, someone locked the golden MVP trophies inside the high-tech equipment room! The culprit left a trail of athletic gear and messy locker rooms. Head Coach Jackson needs your help to crack the math codes, analyze the player profiles, and find the 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 Game Snatcher is _____

Possible suspects

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

NAME	SOCCER SKILL	BASKETBALL SKILL	WRISTBAND WEAR	HEADGEAR STYLE	DISLIKE
Luka Doncic	tiki-taka passing	alley-oop dunk	wears left wristband	neon headband	shiny gold whistle
Kyrie Irving	stepover feint	crossover dribble	wears left wristband	neon headband	squeaky gym floor
Erling Haaland	bicycle kick	crossover dribble	wears left wristband	neon headband	squeaky gym floor
Anthony Davis	bicycle kick	no-look pass	wears right wristband	backwards cap	flat basketball
Robert Lewandowski	nutmeg dribble	crossover dribble	wears left wristband	mesh hairnet	squeaky gym floor
Antoine Griezmann	tiki-taka passing	no-look pass	wears left wristband	neon headband	shiny gold whistle
Alex Morgan	bicycle kick	crossover dribble	wears left wristband	backwards cap	flat basketball
Harry Kane	tiki-taka passing	no-look pass	wears left wristband	neon headband	squeaky gym floor
Mohamed Salah	tiki-taka passing	alley-oop dunk	wears left wristband	mesh hairnet	flat basketball
Son Heung-min	bicycle kick	buzzer-beater shot	wears left wristband	backwards cap	shiny gold whistle
Bukayo Saka	knuckleball shot	crossover dribble	wears left wristband	backwards cap	flat basketball
LeBron James	stepover feint	no-look pass	wears left wristband	backwards cap	flat basketball
Stephen Curry	tiki-taka passing	buzzer-beater shot	wears right wristband	neon headband	squeaky gym floor
Lionel Messi	bicycle kick	buzzer-beater shot	wears left wristband	backwards cap	flat basketball
Giannis Antetokounmpo	knuckleball shot	fadeaway jumper	wears left wristband	neon headband	shiny gold whistle
Kevin Durant	knuckleball shot	fadeaway jumper	wears left wristband	backwards cap	flat basketball
James Harden	knuckleball shot	crossover dribble	wears right wristband	mesh hairnet	shiny gold whistle
Megan Rapinoe	nutmeg dribble	buzzer-beater shot	wears left wristband	backwards cap	flat basketball
Joel Embiid	nutmeg dribble	no-look pass	wears left wristband	neon headband	shiny gold whistle
Chris Paul	knuckleball shot	alley-oop dunk	wears right wristband	backwards cap	shiny gold whistle
Kylian Mbappe	nutmeg dribble	alley-oop dunk	wears left wristband	backwards cap	shiny gold whistle

CLUE 1 Percentages

To unlock the gym's main gate, we must calculate the shooting accuracy percentage from yesterday's box score.

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

T			T										T			
32	26	23	32	26	36	23	5	13	24	35	35	2	32	3	2	24
									T						T	
20	43	44	44	23	19	20	23	24	32	23	19	14	26	2	32	

$25\% \text{ of } 128 = \square \rightarrow \boxed{\text{T}}$

$5\% \text{ of } 60 = \square \rightarrow \boxed{\text{D}}$

$5\% \text{ of } 460 = \square \rightarrow \boxed{\text{E}}$

$20\% \text{ of } 130 = \square \rightarrow \boxed{\text{H}}$

$20\% \text{ of } 100 = \square \rightarrow \boxed{\text{B}}$

$50\% \text{ of } 4 = \square \rightarrow \boxed{\text{O}}$

$25\% \text{ of } 176 = \square \rightarrow \boxed{\text{Z}}$

$20\% \text{ of } 70 = \square \rightarrow \boxed{\text{S}}$

$25\% \text{ of } 52 = \square \rightarrow \boxed{\text{C}}$

$25\% \text{ of } 76 = \square \rightarrow \boxed{\text{R}}$

$5\% \text{ of } 100 = \square \rightarrow \boxed{\text{F}}$

$20\% \text{ of } 215 = \square \rightarrow \boxed{\text{U}}$

$5\% \text{ of } 480 = \square \rightarrow \boxed{\text{A}}$

$50\% \text{ of } 70 = \square \rightarrow \boxed{\text{N}}$

$40\% \text{ of } 90 = \square \rightarrow \boxed{\text{I}}$

Scratch space:

CLUE 2 Exponents

The tournament bracket grows exponentially each round. Let's use exponent patterns to trace where the suspect fled.

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

L										L			
125	36	81	196	144	343	243	225	100	125	361	144	196	

169	343	36	121	196	289	100	81	64	169	100	121	100	196	196	256	361

64	243	243	343

$5^3 = \square \rightarrow \text{L}$	$12^2 = \square \rightarrow \text{F}$	$11^2 = \square \rightarrow \text{S}$	$8^2 = \square \rightarrow \text{D}$
$4^4 = \square \rightarrow \text{H}$	$3^4 = \square \rightarrow \text{N}$	$15^2 = \square \rightarrow \text{M}$	$14^2 = \square \rightarrow \text{T}$
$7^3 = \square \rightarrow \text{R}$	$3^5 = \square \rightarrow \text{O}$	$13^2 = \square \rightarrow \text{W}$	$10^2 = \square \rightarrow \text{A}$
$6^2 = \square \rightarrow \text{I}$	$17^2 = \square \rightarrow \text{B}$	$19^2 = \square \rightarrow \text{E}$	

Scratch space:

CLUE 3

Order of operations

A locker combination requires solving the order of operations on the coach's clipboard to count the team jerseys.

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

T																	
12	32	29	46	7	70	70	49	7	37	53	32	19	37	37	29	61	49

			T						T				
24	70	49	12	40	49	53	27	29	12	40	49	70	70

$3 \times 10 - 18 = \square \rightarrow \boxed{\text{T}}$

$7 \times 10 - 30 = \square \rightarrow \boxed{\text{B}}$

$3 + 8 \times 2 = \square \rightarrow \boxed{\text{U}}$

$45 + 2 \times 8 = \square \rightarrow \boxed{\text{D}}$

$16 + 5 \times 6 = \square \rightarrow \boxed{\text{V}}$

$10 \times 6 - 11 = \square \rightarrow \boxed{\text{A}}$

$3 + 2 \times 2 = \square \rightarrow \boxed{\text{I}}$

$1 + 4 \times 7 = \square \rightarrow \boxed{\text{E}}$

$9 \times 6 - 17 = \square \rightarrow \boxed{\text{N}}$

$22 + 5 \times 2 = \square \rightarrow \boxed{\text{H}}$

$11 \times 7 - 7 = \square \rightarrow \boxed{\text{L}}$

$18 + 3 \times 3 = \square \rightarrow \boxed{\text{K}}$

$6 + 3 \times 6 = \square \rightarrow \boxed{\text{F}}$

$41 + 4 \times 3 = \square \rightarrow \boxed{\text{S}}$

Scratch space:

Multiplication facts (1-12)

We found rows of basketball racks in the hallway. Multiplying the balls per rack will reveal the next clue room.

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

32 64 7 49 7 32 7 144 32 77 2 7 22 56 80 8 49 100

88 32 55 100 120 108 100 144 5 42 100 55 49 88 144 100 84

$4 \times 8 = \boxed{} \rightarrow \boxed{\text{T}}$

$2 \times 11 = \boxed{} \rightarrow \boxed{\text{F}}$

$10 \times 10 = \boxed{} \rightarrow \boxed{\text{A}}$

$12 \times 9 = \boxed{} \rightarrow \boxed{\text{B}}$

$7 \times 7 = \square \rightarrow \boxed{\text{D}}$

$$8 \times 8 = \boxed{} \rightarrow \boxed{\text{H}}$$

$12 \times 12 = \boxed{} \rightarrow \boxed{\text{C}}$

$$8 \times 11 = \boxed{} \rightarrow \boxed{\mathbf{S}}$$

$7 \times 11 = \boxed{} \rightarrow \boxed{}$

$$2 \times 1 = \boxed{} \rightarrow \boxed{\mathbf{v}}$$

$5 \times 1 = \square \rightarrow \text{K}$

$6 \times 7 = \boxed{} \rightarrow \boxed{\mathbf{W}}$

$10 \times 8 = \boxed{} \rightarrow \boxed{\mathbf{U}}$

$$12 \times 7 = \boxed{} \rightarrow \boxed{\text{P}}$$

$12 \times 10 = \boxed{} \rightarrow \boxed{\mathbf{Y}}$

$$8 \times 1 = \boxed{} \rightarrow \boxed{\text{N}}$$

$$8 \times 7 = \boxed{} \rightarrow \boxed{0}$$

$$5 \times 11 = \boxed{} \rightarrow \boxed{\text{R}}$$

$1 \times 7 = \boxed{} \rightarrow \boxed{\text{E}}$

Scratch space:

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

The referee needs to split the remaining training pennies evenly among the scrimmage teams to uncover the final clue.

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:

$70 \div 10 = \boxed{}$

$4 \div 1 = \boxed{}$

$20 \div 10 = \boxed{}$

$24 \div 2 = \boxed{}$

$30 \div 6 = \boxed{}$

$30 \div 10 = \boxed{}$

$32 \div 4 = \boxed{}$

$18 \div 2 = \boxed{}$

$12 \div 12 = \boxed{}$

$121 \div 11 = \boxed{}$

$70 \div 7 = \boxed{}$

Step 2 - cross out the sentence with each answer:

1. The villain confused defenders with a quick stepover feint, then set up a perfect alley oop dunk.
2. The villain confused defenders with a quick stepover feint, then dished out a sneaky no look pass.
3. The villain soared high for a flashy bicycle kick, then set up a perfect alley oop dunk.
4. The villain blasted a wild knuckleball shot, then sank a tough fadeaway jumper.
5. The villain dazzled everyone with rapid tiki taka passing, then set up a perfect alley oop dunk.
6. The villain soared high for a flashy bicycle kick, then broke ankles with a sharp crossover dribble.
7. The villain blasted a wild knuckleball shot, then broke ankles with a sharp crossover dribble.
8. The villain slipped the ball through with a nutmeg dribble, then sank a tough fadeaway jumper.
9. The villain dazzled everyone with rapid tiki taka passing, then dished out a sneaky no look pass.
10. The villain soared high for a flashy bicycle kick, then stole the trophy at the final buzzer.
11. The villain slipped the ball through with a nutmeg dribble, then stole the trophy at the final buzzer.
12. The villain slipped the ball through with a nutmeg dribble, then broke ankles with a sharp crossover dribble.

Answer Key

The Case of the Missing MVP Trophies

Culprit: Alex Morgan

bicycle kick · crossover dribble · wears left wristband · backwards cap · flat basketball

Trail: Start 21 → Clue 1 17 → Clue 2 14 → Clue 3 5 → Clue 4 4 → Clue 5 1

Clue 1 (Percentages): "THE THIEF CANNOT DO A BUZZER BEATER SHOT"

25% of 128 = 32 (T) · 5% of 60 = 3 (D) · 5% of 460 = 23 (E) · 20% of 130 = 26 (H) · 20% of 100 = 20 (B) · 50% of 4 = 2 (O) · 25% of 176 = 44 (Z) · 20% of 70 = 14 (S) · 25% of 52 = 13 (C) · 25% of 76 = 19 (R) · 5% of 100 = 5 (F) · 20% of 215 = 43 (U) · 5% of 480 = 24 (A) · 50% of 70 = 35 (N) · 40% of 90 = 36 (I)

Clue 2 (Exponents): "LINT FROM A LEFT WRISTBAND WAS AT THE DOOR"

$5^3 = 125$ (L) · $12^2 = 144$ (F) · $11^2 = 121$ (S) · $8^2 = 64$ (D) · $4^4 = 256$ (H) · $3^4 = 81$ (N) · $15^2 = 225$ (M) · $14^2 = 196$ (T) · $7^3 = 343$ (R) · $3^5 = 243$ (O) · $13^2 = 169$ (W) · $10^2 = 100$ (A) · $6^2 = 36$ (I) · $17^2 = 289$ (B) · $19^2 = 361$ (E)

Clue 3 (Order of operations): "THE VILLAIN SHUNNED A FLAT BASKETBALL"

$3 \times 10 - 18 = 12$ (T) · $7 \times 10 - 30 = 40$ (B) · $3 + 8 \times 2 = 19$ (U) · $45 + 2 \times 8 = 61$ (D) · $16 + 5 \times 6 = 46$ (V) · $10 \times 6 - 11 = 49$ (A) · $3 + 2 \times 2 = 7$ (I) · $1 + 4 \times 7 = 29$ (E) · $9 \times 6 - 17 = 37$ (N) · $22 + 5 \times 2 = 32$ (H) · $11 \times 7 - 7 = 70$ (L) · $18 + 3 \times 3 = 27$ (K) · $6 + 3 \times 6 = 24$ (F) · $41 + 4 \times 3 = 53$ (S)

Clue 4 (Multiplication facts (1-12)): "THE DETECTIVE FOUND A STRAY BACKWARDS CAP"

$4 \times 8 = 32$ (T) · $2 \times 11 = 22$ (F) · $10 \times 10 = 100$ (A) · $12 \times 9 = 108$ (B) · $7 \times 7 = 49$ (D) · $8 \times 8 = 64$ (H) · $12 \times 12 = 144$ (C) · $8 \times 11 = 88$ (S) · $7 \times 11 = 77$ (I) · $2 \times 1 = 2$ (V) · $5 \times 1 = 5$ (K) · $6 \times 7 = 42$ (W) · $10 \times 8 = 80$ (U) · $12 \times 7 = 84$ (P) · $12 \times 10 = 120$ (Y) · $8 \times 1 = 8$ (N) · $8 \times 7 = 56$ (O) · $5 \times 11 = 55$ (R) · $1 \times 7 = 7$ (E)

Clue 5 (Division facts (1-12)): surviving statement is box 6 → Alex Morgan

$70 \div 10 = 7$ · $4 \div 1 = 4$ · $20 \div 10 = 2$ · $24 \div 2 = 12$ · $30 \div 6 = 5$ · $30 \div 10 = 3$ · $32 \div 4 = 8$ · $18 \div 2 = 9$ · $12 \div 12 = 1$ · $121 \div 11 = 11$ · $70 \div 7 = 10$