The Case of the Missing Golden Trophy

Grade 5 math · Fractions of a number, Order of operations, Multiplication, Rounding, Division · Reading level grades 5-6

Detective: _____ **Date:** _____

Minutes before the Starlight League Finals, the coveted championship trophy vanished right off the podium. Detective work is needed on the pitch to decode the clues and spot 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 Pitch Sneak is _____

Possible suspects

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

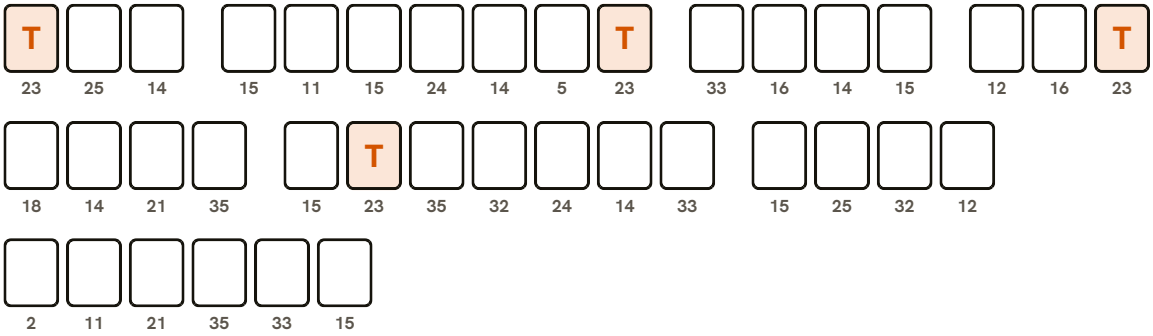
NAME	SIGNATURE MOVE	GEAR ITEM	DOMINANT FOOT	HAIRSTYLE	PITCH HAZARD
Gavi	Bicycle Kick Blast	Weighted Goalie Gloves	Left Footed	Slicked Black Hair	Slippery Mud Pitch
Lionel Messi	Curving Corner Kick	Neon Cleats	Right Footed	Slicked Black Hair	Bright Stadium Lights
Bukayo Saka	Rocket Cannon Shot	Glow Wristband	Right Footed	Spiky Blue Hair	Bright Stadium Lights
Bruno Fernandes	Phantom Header	Patterned Headband	Right Footed	Spiky Blue Hair	Slippery Mud Pitch
Vinicius Jr	Bicycle Kick Blast	Glow Wristband	Right Footed	Spiky Blue Hair	Bright Stadium Lights
Luka Modric	Stealth Dribble	Glow Wristband	Right Footed	Curly Red Hair	Bright Stadium Lights
Lucy Bronze	Bicycle Kick Blast	Glow Wristband	Right Footed	Curly Red Hair	Slippery Mud Pitch
Megan Rapinoe	Rocket Cannon Shot	Striped Shin Guards	Right Footed	Spiky Blue Hair	Bright Stadium Lights
Alex Morgan	Stealth Dribble	Weighted Goalie Gloves	Right Footed	Slicked Black Hair	Bright Stadium Lights
Kylian Mbappe	Curving Corner Kick	Weighted Goalie Gloves	Right Footed	Curly Red Hair	Bright Stadium Lights
Alphonso Davies	Rocket Cannon Shot	Patterned Headband	Right Footed	Curly Red Hair	Bright Stadium Lights
Pedri	Stealth Dribble	Neon Cleats	Right Footed	Slicked Black Hair	Bright Stadium Lights
Kevin De Bruyne	Curving Corner Kick	Neon Cleats	Right Footed	Curly Red Hair	Bright Stadium Lights
Sam Kerr	Stealth Dribble	Neon Cleats	Right Footed	Curly Red Hair	Slippery Mud Pitch
Cristiano Ronaldo	Bicycle Kick Blast	Striped Shin Guards	Right Footed	Slicked Black Hair	Slippery Mud Pitch
Marta	Bicycle Kick Blast	Weighted Goalie Gloves	Left Footed	Slicked Black Hair	Bright Stadium Lights
Rose Lavelle	Phantom Header	Striped Shin Guards	Right Footed	Slicked Black Hair	Slippery Mud Pitch
Aitana Bonmati	Phantom Header	Patterned Headband	Left Footed	Curly Red Hair	Slippery Mud Pitch
Son Heungmin	Phantom Header	Patterned Headband	Left Footed	Curly Red Hair	Bright Stadium Lights
Christine Sinclair	Rocket Cannon Shot	Striped Shin Guards	Right Footed	Curly Red Hair	Bright Stadium Lights
Erling Haaland	Stealth Dribble	Patterned Headband	Left Footed	Slicked Black Hair	Loud Whistle Blast

make your own at mathcrackers.com

CLUE 1 Fractions of a number

> The stadium gear room had a stack of training cones but only a fraction was tagged as evidence.

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



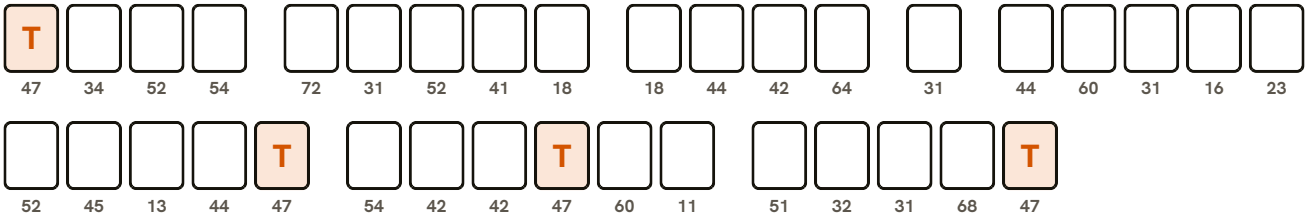
1/6 of 138 = ☐ → T	2/8 of 60 = ☐ → S	7/8 of 24 = ☐ → A
5/10 of 70 = ☐ → R	4/6 of 48 = ☐ → I	1/4 of 44 = ☐ → U
2/4 of 32 = ☐ → O	1/10 of 120 = ☐ → N	1/6 of 198 = ☐ → D
2/4 of 48 = ☐ → P	5/10 of 4 = ☐ → G	5/10 of 10 = ☐ → C
3/6 of 50 = ☐ → H	1/5 of 90 = ☐ → W	2/3 of 21 = ☐ → E

Scratch space:

CLUE 2 Order of operations

The stadium scoreboard calculated player speed ratings using a multistep math formula.

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



33 + 2 × 7 = ☐ → T

18 + 4 × 6 = ☐ → O

4 + 9 × 3 = ☐ → A

5 × 12 - 8 = ☐ → R

8 × 11 - 16 = ☐ → M

50 + 5 × 2 = ☐ → E

5 × 9 - 13 = ☐ → L

27 + 3 × 9 = ☐ → F

2 × 10 - 7 = ☐ → G

10 + 3 × 8 = ☐ → U

10 + 2 × 4 = ☐ → S

7 × 10 - 29 = ☐ → K

6 × 3 - 7 = ☐ → D

9 × 6 - 3 = ☐ → P

8 × 9 - 4 = ☐ → N

1 + 5 × 3 = ☐ → V

10 × 9 - 26 = ☐ → W

8 + 3 × 5 = ☐ → Y

5 × 12 - 16 = ☐ → H

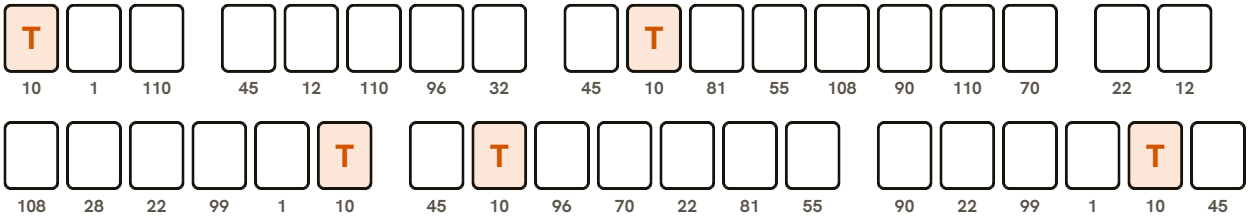
5 × 11 - 10 = ☐ → I

Scratch space:

CLUE 3 Multiplication facts (1-12)

> The equipment manager counted equal stacks of match soccer balls stored in rows behind the bench.

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



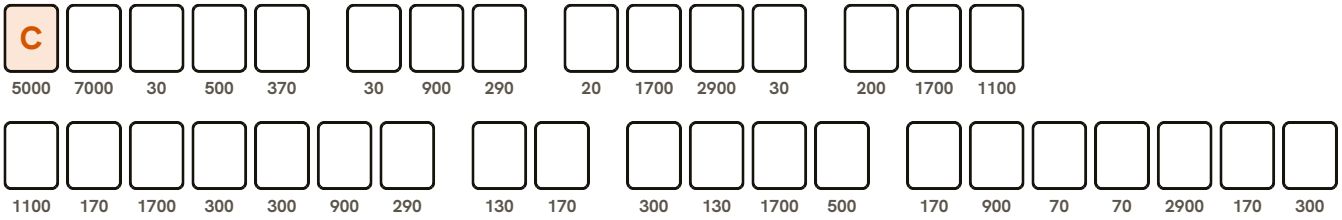
1 × 10 = ☐ → T	10 × 7 = ☐ → D	11 × 2 = ☐ → I		
12 × 8 = ☐ → A	9 × 9 = ☐ → U	12 × 9 = ☐ → B		
5 × 9 = ☐ → S	11 × 9 = ☐ → G	3 × 4 = ☐ → N	1 × 1 = ☐ → H	
4 × 7 = ☐ → R	8 × 4 = ☐ → K	11 × 5 = ☐ → M		
11 × 10 = ☐ → E	9 × 10 = ☐ → L			

Scratch space:

CLUE 4 Rounding

The digital stadium radar estimated shot velocity and rounded the total to the nearest ten.

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



Round 4,752 to the nearest thousand ☐ → C

Round 133 to the nearest ten ☐ → O

Round 30 to the nearest ten ☐ → R

Round 256 to the nearest hundred ☐ → G

Round 370 to the nearest ten ☐ → Y

Round 165 to the nearest hundred ☐ → W

Round 170 to the nearest ten ☐ → N

Round 2,907 to the nearest hundred ☐ → I

Round 6,851 to the nearest thousand ☐ → U

Round 521 to the nearest hundred ☐ → L

Round 74 to the nearest ten ☐ → T

Round 931 to the nearest hundred ☐ → E

Round 17 to the nearest ten ☐ → H

Round 1,659 to the nearest hundred ☐ → A

Round 292 to the nearest ten ☐ → D

Round 1,125 to the nearest hundred ☐ → S

Scratch space:

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

> The coaching staff divided the rest day energy bars equally among all the starter squads.

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:

30 ÷ 3 = ☐	6 ÷ 1 = ☐	8 ÷ 8 = ☐	60 ÷ 12 = ☐	15 ÷ 5 = ☐
60 ÷ 5 = ☐	77 ÷ 7 = ☐	18 ÷ 2 = ☐	44 ÷ 11 = ☐	14 ÷ 7 = ☐
63 ÷ 9 = ☐				

Step 2 - cross out the sentence with each answer:

1. The villain launched a rocket shot, then tied a patterned headband.
2. The villain headed the championship ball, then snagged a glow wristband.
3. The villain launched a rocket shot, then flashed neon cleats.
4. The villain curved a corner kick, then snagged a glow wristband.
5. The villain launched a rocket shot, then adjusted striped shin guards.
6. The villain dribbled past security, then snagged a glow wristband.
7. The villain dribbled past security, then tied a patterned headband.
8. The villain curved a corner kick, then tightened goalie gloves.
9. The villain curved a corner kick, then tied a patterned headband.
10. The villain curved a corner kick, then flashed neon cleats.
11. The villain blasted a bicycle kick, then snagged a glow wristband.
12. The villain dribbled past security, then tightened goalie gloves.

TEACHER / PARENT

Answer Key

The Case of the Missing Golden Trophy

Culprit: Kylian Mbappe

Curving Corner Kick · Weighted Goalie Gloves · Right Footed · Curly Red Hair · Bright Stadium Lights

Trail: Start 21 → Clue 1 17 → Clue 2 12 → Clue 3 9 → Clue 4 4 → Clue 5 1

Clue 1 (Fractions of a number): "THE SUSPECT DOES NOT WEAR STRIPED SHIN GUARDS"

1/6 of 138 = 23 (T) · 2/8 of 60 = 15 (S) · 7/8 of 24 = 21 (A) · 5/10 of 70 = 35 (R) · 4/6 of 48 = 32 (I) · 1/4 of 44 = 11 (U) · 2/4 of 32 = 16 (O) · 1/10 of 120 = 12 (N) · 1/6 of 198 = 33 (D) · 2/4 of 48 = 24 (P) · 5/10 of 4 = 2 (G) · 5/10 of 10 = 5 (C) · 3/6 of 50 = 25 (H) · 1/5 of 90 = 18 (W) · 2/3 of 21 = 14 (E)

Clue 2 (Order of operations): "TURF MARKS SHOW A HEAVY RIGHT FOOTED PLANT"

33 + 2 × 7 = 47 (T) · 18 + 4 × 6 = 42 (O) · 4 + 9 × 3 = 31 (A) · 5 × 12 - 8 = 52 (R) · 8 × 11 - 16 = 72 (M) · 50 + 5 × 2 = 60 (E) · 5 × 9 - 13 = 32 (L) · 27 + 3 × 9 = 54 (F) · 2 × 10 - 7 = 13 (G) · 10 + 3 × 8 = 34 (U) · 10 + 2 × 4 = 18 (S) · 7 × 10 - 29 = 41 (K) · 6 × 3 - 7 = 11 (D) · 9 × 6 - 3 = 51 (P) · 8 × 9 - 4 = 68 (N) · 1 + 5 × 3 = 16 (V) · 10 × 9 - 26 = 64 (W) · 8 + 3 × 5 = 23 (Y) · 5 × 12 - 16 = 44 (H) · 5 × 11 - 10 = 45 (I)

Clue 3 (Multiplication facts (1-12)): "THE SNEAK STUMBLED IN BRIGHT STADIUM LIGHTS"

1 × 10 = 10 (T) · 10 × 7 = 70 (D) · 11 × 2 = 22 (I) · 12 × 8 = 96 (A) · 9 × 9 = 81 (U) · 12 × 9 = 108 (B) · 5 × 9 = 45 (S) · 11 × 9 = 99 (G) · 3 × 4 = 12 (N) · 1 × 1 = 1 (H) · 4 × 7 = 28 (R) · 8 × 4 = 32 (K) · 11 × 5 = 55 (M) · 11 × 10 = 110 (E) · 9 × 10 = 90 (L)

Clue 4 (Rounding): "CURLY RED HAIR WAS SNAGGED ON GOAL NETTING"

Round 4,752 to the nearest thousand = 5000 (C) · Round 133 to the nearest ten = 130 (O) · Round 30 to the nearest ten = 30 (R) · Round 256 to the nearest hundred = 300 (G) · Round 370 to the nearest ten = 370 (Y) · Round 165 to the nearest hundred = 200 (W) · Round 170 to the nearest ten = 170 (N) · Round 2,907 to the nearest hundred = 2900 (I) · Round 6,851 to the nearest thousand = 7000 (U) · Round 521 to the nearest hundred = 500 (L) · Round 74 to the nearest ten = 70 (T) · Round 931 to the nearest hundred = 900 (E) · Round 17 to the nearest ten = 20 (H) · Round 1,659 to the nearest hundred = 1700 (A) · Round 292 to the nearest ten = 290 (D) · Round 1,125 to the nearest hundred = 1100 (S)

Clue 5 (Division facts (1-12)): surviving statement is box 8 → Kylian Mbappe

30 ÷ 3 = 10 · 6 ÷ 1 = 6 · 8 ÷ 8 = 1 · 60 ÷ 12 = 5 · 15 ÷ 5 = 3 · 60 ÷ 5 = 12 · 77 ÷ 7 = 11 · 18 ÷ 2 = 9 · 44 ÷ 11 = 4 · 14 ÷ 7 = 2 · 63 ÷ 9 = 7