



The Case of the Micro Cup Mascot

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

Detective: _____ **Date:** _____

During the Micro World Cup tournament, a sneaky water-bear sized villain snatched the golden trophy and hid it somewhere in the damp moss! Detectives must investigate the microscopic star players to find out who carried out the heist.

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 Micro-Snooper is _____

Possible suspects

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

NAME	SUPER MOVE	SURVIVAL GEAR	KICKING FOOT	HEADBAND COLOR	DISTRACTION
Mohamed	Bicycle Kick	Pressure Suit	Left Footed	Cobalt Blue	Crushed Moss
Manuel	Bicycle Kick	Radiation Shield	Left Footed	Neon Green	Crushed Moss
Federico	Quantum Save	Freezing Armor	Left Footed	Neon Green	Magnifying Glass
Harry	Quantum Save	Pressure Suit	Right Footed	Solar Yellow	Salty Water
Lionel	Bicycle Kick	Heat Shield	Left Footed	Neon Green	Crushed Moss
Jamal	Tardigrade Tackle	Radiation Shield	Right Footed	Cobalt Blue	Magnifying Glass
Cristiano	Bicycle Kick	Freezing Armor	Right Footed	Neon Green	Crushed Moss
Son	Micro Sprint	Freezing Armor	Left Footed	Solar Yellow	Salty Water
Vinicius	Water Blast	Tardigrade Shell	Left Footed	Neon Green	Crushed Moss
Kevin	Bicycle Kick	Heat Shield	Left Footed	Cobalt Blue	Magnifying Glass
Erling	Quantum Save	Pressure Suit	Left Footed	Cobalt Blue	Crushed Moss
Bukayo	Micro Sprint	Tardigrade Shell	Left Footed	Solar Yellow	Salty Water
Kylian	Water Blast	Radiation Shield	Left Footed	Cobalt Blue	Crushed Moss
Antoine	Quantum Save	Freezing Armor	Right Footed	Neon Green	Magnifying Glass
Alisson	Bicycle Kick	Pressure Suit	Left Footed	Neon Green	Crushed Moss
Pedri	Micro Sprint	Tardigrade Shell	Left Footed	Cobalt Blue	Crushed Moss
Gavi	Bicycle Kick	Pressure Suit	Right Footed	Cobalt Blue	Salty Water
Thibaut	Water Blast	Freezing Armor	Left Footed	Solar Yellow	Salty Water
Virgil	Quantum Save	Radiation Shield	Left Footed	Neon Green	Crushed Moss
Luka	Bicycle Kick	Tardigrade Shell	Right Footed	Neon Green	Salty Water
Neymar	Micro Sprint	Tardigrade Shell	Left Footed	Neon Green	Crushed Moss

Multiplication facts (1-12)

The stadium security team tallied the mini flag displays set up in equal rows across the pitch.

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

A number line from 0 to 100 with increments of 3. The number 90 is highlighted in orange and labeled with a 'T'.

$9 \times 10 = \square \rightarrow \mathbf{T}$

$7 \times 8 = \boxed{} \rightarrow \boxed{\mathbf{A}}$

$4 \times 9 = \square \rightarrow \mathbf{C}$

$9 \times 11 = \boxed{} \rightarrow \boxed{\mathbf{R}}$

$10 \times 5 = \boxed{} \rightarrow \boxed{0}$

$2 \times 7 = \square \rightarrow \mathbf{W}$

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

$9 \times 9 = \square \rightarrow \boxed{\text{P}}$

$11 \times 6 = \square \rightarrow \boxed{\mathbf{G}}$

$3 \times 9 = \square \rightarrow \boxed{\text{S}}$

$8 \times 12 = \square \rightarrow \boxed{\text{H}}$

$3 \times 7 = \square \rightarrow \boxed{\text{U}}$

$3 \times 5 = \square \rightarrow \boxed{\text{D}}$

$3 \times 1 = \boxed{} \rightarrow \boxed{\mathbf{E}}$

$1 \times 11 = \boxed{} \rightarrow \boxed{1}$

$4 \times 1 = \boxed{} \rightarrow \boxed{\text{L}}$

Scratch space:

CLUE 2

Fractions of a number

The tiny referee checked the fraction of water droplets remaining on the blade of grass.

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

W									W										
29	17	8	37	3	16	16	16	38	29	4	3	22	8	22	5	5	8	3	7
9	4	3	38	8	20	38	33	30	16	5	37	20	5	16	16				

$$5/10 \text{ of } 58 = \boxed{} \rightarrow \boxed{\text{W}}$$

$$5/10 \text{ of } 66 = \boxed{} \rightarrow \boxed{\text{R}}$$

$$1/2 \text{ of } 32 = \boxed{} \rightarrow \boxed{\text{S}}$$

$$4/6 \text{ of } 33 = \boxed{} \rightarrow \boxed{\text{F}}$$

$$4/8 \text{ of } 74 = \boxed{} \rightarrow \boxed{\text{N}}$$

$$5/6 \text{ of } 6 = \boxed{} \rightarrow \boxed{\text{O}}$$

$$8/10 \text{ of } 5 = \boxed{} \rightarrow \boxed{\text{L}}$$

$$2/8 \text{ of } 68 = \boxed{} \rightarrow \boxed{\text{I}}$$

$$6/10 \text{ of } 50 = \boxed{} \rightarrow \boxed{\text{K}}$$

$$1/6 \text{ of } 54 = \boxed{} \rightarrow \boxed{\text{C}}$$

$$4/8 \text{ of } 76 = \boxed{} \rightarrow \boxed{\text{A}}$$

$$3/5 \text{ of } 5 = \boxed{} \rightarrow \boxed{\text{E}}$$

$$1/4 \text{ of } 80 = \boxed{} \rightarrow \boxed{\text{M}}$$

$$1/4 \text{ of } 28 = \boxed{} \rightarrow \boxed{\text{D}}$$

$$1/2 \text{ of } 16 = \boxed{} \rightarrow \boxed{\text{T}}$$

Scratch space:

Order of operations

The stadium announcer followed a strict set of step-by-step rules to calculate match statistics.

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

Two rows of number boxes for a dot plot. The top row has 16 boxes with values: 53 (orange), 77, 35, 9, 9, 71, 55, 35, 41, 79, 78, 15, 20, 31, 55, 49. The bottom row has 16 boxes with values: 21, 35, 20, 20, 20, 9, 35, 59, 59, 55, 49, 9, 31, 55, 20, 39, 55, 53 (orange), 75.

$11 \times 6 - 13 = \boxed{} \rightarrow \boxed{\text{A}}$

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

$$65 + 5 \times 2 = \boxed{} \rightarrow \boxed{\text{K}}$$

$$6 \times 10^{-21} = \boxed{} \rightarrow \boxed{\text{N}}$$

$9 \times 11 - 20 = \boxed{} \rightarrow \boxed{\text{C}}$

$19 + 6 \times 6 = \boxed{} \rightarrow \boxed{\text{E}}$

$$9 \times 10 - 13 = \boxed{} \rightarrow \boxed{\mathbf{B}}$$

$$22 + 3 \times 3 = \boxed{} \rightarrow \boxed{\text{H}}$$

$$9 \times 6 - 19 = \boxed{} \rightarrow \boxed{0}$$

$$8 \times 11 - 17 = \boxed{} \rightarrow \boxed{\text{L}}$$

$$4 + 2 \times 8 = \boxed{} \rightarrow \boxed{\mathbf{S}}$$

$$35 + 8 \times 3 = \boxed{} \rightarrow \boxed{\text{P}}$$

$$11 \times 2 - 7 = \boxed{} \rightarrow \boxed{\text{U}}$$

$$6 \times 7 - 1 = \boxed{} \rightarrow \boxed{\text{F}}$$

$11 + 2 \times 5 = \boxed{} \rightarrow \boxed{\text{M}}$

$$54 + 4 \times 6 = \boxed{} \rightarrow \boxed{\text{R}}$$

$7 \times 8 - 7 = \boxed{} \rightarrow \boxed{\text{D}}$

Scratch space:

CLUE 4
Rounding

The microscopic stadium scoreboard only displays player speed estimates rounded to the nearest ten.

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

N			N					N								N	
20	5000	9000	20	90	1700	5000	5000	20	3000	5000	1100	110	370	1100	20	110	

																N			
4300	230	370	5000	1700	700	3700	5000	1700	5000	2000	5000	4300	30	370	5000	3000	230	20	110

Round 21 to the nearest ten → **N**

Round 712 to the nearest hundred → **S**

Round 232 to the nearest ten → **I**

Round 367 to the nearest ten → **B**

Round 8,507 to the nearest thousand → **O**

Round 4,328 to the nearest hundred → **F**

Round 93 to the nearest ten → **G**

Round 1,085 to the nearest hundred → **A**

Round 4,601 to the nearest thousand → **E**

Round 3,735 to the nearest hundred → **W**

Round 2,784 to the nearest thousand → **H**

Round 1,674 to the nearest hundred → **R**

Round 29 to the nearest ten → **T**

Round 1,887 to the nearest thousand → **L**

Round 109 to the nearest ten → **D**

Scratch space:

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

The equipment manager divided the miniature soccer balls equally among the micro teams.

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:

$2 \div 1 = \boxed{}$

$72 \div 8 = \boxed{}$

$20 \div 5 = \boxed{}$

$72 \div 12 = \boxed{}$

$28 \div 4 = \boxed{}$

$3 \div 3 = \boxed{}$

$40 \div 8 = \boxed{}$

$36 \div 12 = \boxed{}$

$121 \div 11 = \boxed{}$

$64 \div 8 = \boxed{}$

$48 \div 4 = \boxed{}$

Step 2 - cross out the sentence with each answer:

1. The villain blasted a tiny jet of water, then pressurized their tiny suit.
2. The villain leaped for a quantum goalkeeper save, then activated a radiation shield.
3. The villain blasted a tiny jet of water, then donned freezing armor.
4. The villain executed a microscopic bicycle kick, then switched on a heat shield.
5. The villain leaped for a quantum goalkeeper save, then pressurized their tiny suit.
6. The villain sprinted across the damp moss, then donned freezing armor.
7. The villain sprinted across the damp moss, then switched on a heat shield.
8. The villain sprinted across the damp moss, then curled into a tardigrade shell.
9. The villain executed a microscopic bicycle kick, then activated a radiation shield.
10. The villain executed a microscopic bicycle kick, then pressurized their tiny suit.
11. The villain leaped for a quantum goalkeeper save, then donned freezing armor.
12. The villain executed a microscopic bicycle kick, then donned freezing armor.

Answer Key

The Case of the Micro Cup Mascot

Culprit: Alisson

Bicycle Kick · Pressure Suit · Left Footed · Neon Green · Crushed Moss

Trail: Start 21 → Clue 1 16 → Clue 2 11 → Clue 3 7 → Clue 4 4 → Clue 5 1

Clue 1 (Multiplication facts (1-12)): "THE SUSPECT DOES NOT WEAR A TARDIGRADE SHELL"

$9 \times 10 = 90$ (T) · $7 \times 8 = 56$ (A) · $4 \times 9 = 36$ (C) · $9 \times 11 = 99$ (R) · $10 \times 5 = 50$ (O) · $2 \times 7 = 14$ (W) · $5 \times 11 = 55$ (N) · $9 \times 9 = 81$ (P) · $11 \times 6 = 66$ (G) · $3 \times 9 = 27$ (S) · $8 \times 12 = 96$ (H) · $3 \times 7 = 21$ (U) · $3 \times 5 = 15$ (D) · $3 \times 1 = 3$ (E) · $1 \times 11 = 11$ (I) · $4 \times 1 = 4$ (L)

Clue 2 (Fractions of a number): "WITNESS SAW LEFT FOOTED CLEAT MARKS ON MOSS"

$5/10$ of 58 = 29 (W) · $5/10$ of 66 = 33 (R) · $1/2$ of 32 = 16 (S) · $4/6$ of 33 = 22 (F) · $4/8$ of 74 = 37 (N) · $5/6$ of 6 = 5 (O) · $8/10$ of 5 = 4 (L) · $2/8$ of 68 = 17 (I) · $6/10$ of 50 = 30 (K) · $1/6$ of 54 = 9 (C) · $4/8$ of 76 = 38 (A) · $3/5$ of 5 = 3 (E) · $1/4$ of 80 = 20 (M) · $1/4$ of 28 = 7 (D) · $1/2$ of 16 = 8 (T)

Clue 3 (Order of operations): "A BOTTLE OF CRUSHED MOSS STOPPED THE SNEAK"

$11 \times 6 - 13 = 53$ (A) · $3 + 2 \times 3 = 9$ (T) · $65 + 5 \times 2 = 75$ (K) · $6 \times 10 - 21 = 39$ (N) · $9 \times 11 - 20 = 79$ (C) · $19 + 6 \times 6 = 55$ (E) · $9 \times 10 - 13 = 77$ (B) · $22 + 3 \times 3 = 31$ (H) · $9 \times 6 - 19 = 35$ (O) · $8 \times 11 - 17 = 71$ (L) · $4 + 2 \times 8 = 20$ (S) · $35 + 8 \times 3 = 59$ (P) · $11 \times 2 - 7 = 15$ (U) · $6 \times 7 - 1 = 41$ (F) · $11 + 2 \times 5 = 21$ (M) · $54 + 4 \times 6 = 78$ (R) · $7 \times 8 - 7 = 49$ (D)

Clue 4 (Rounding): "NEON GREEN HEADBAND FIBERS WERE LEFT BEHIND"

Round 21 to the nearest ten = 20 (N) · Round 712 to the nearest hundred = 700 (S) · Round 232 to the nearest ten = 230 (I) · Round 367 to the nearest ten = 370 (B) · Round 8,507 to the nearest thousand = 9000 (O) · Round 4,328 to the nearest hundred = 4300 (F) · Round 93 to the nearest ten = 90 (G) · Round 1,085 to the nearest hundred = 1100 (A) · Round 4,601 to the nearest thousand = 5000 (E) · Round 3,735 to the nearest hundred = 3700 (W) · Round 2,784 to the nearest thousand = 3000 (H) · Round 1,674 to the nearest hundred = 1700 (R) · Round 29 to the nearest ten = 30 (T) · Round 1,887 to the nearest thousand = 2000 (L) · Round 109 to the nearest ten = 110 (D)

Clue 5 (Division facts (1-12)): surviving statement is box 10 → Alisson

$2 \div 1 = 2$ · $72 \div 8 = 9$ · $20 \div 5 = 4$ · $72 \div 12 = 6$ · $28 \div 4 = 7$ · $3 \div 3 = 1$ · $40 \div 8 = 5$ · $36 \div 12 = 3$ · $121 \div 11 = 11$ · $64 \div 8 = 8$ · $48 \div 4 = 12$