



The Mystery of the Mossy Hoop

Grade 5 math · Place value, Rounding, Multiplication, Addition, Division · Reading level grades 3-4

Detective: _____ Date: _____

The rare Emerald Tree Boa has lost its favorite blocky snake bed! Someone snuck into the arena, played a weird tune on a ukulele, shot a crazy trick hoop, and escaped into the digital jungle. We need your math skills to track down the thief before the big game!

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 Lizard Burglar is _____

Possible suspects

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

NAME	TRICK SHOT	JUNGLE ABILITY	GAME WRISTBAND	HAIR STYLE	SECRET FEAR
Dan Herp	Redstone Jump Shot	Double Dribbling	Wearing Wristband	Green Mohawk	Squeaky Shoes
Devin Dart	Creeper Block Building	Enderman Teleport	Wearing Wristband	Spikey Orange	Fear of Water Blocks
Skyler Skink	Lizard Venom Spit	Enderman Teleport	Wearing Wristband	Spikey Orange	Out of Tune G String
Rex Raptor	Scale Camouflage	Toad Hop Jump	Wearing Wristband	Spikey Orange	Out of Tune G String
Caitlin Claw	Ukulele Strumming	Toad Hop Jump	Wearing Wristband	Purple Pixie	Out of Tune G String
Kobe Slam	Ukulele Strumming	Fire Resistance	No Wristband	Spikey Orange	Out of Tune G String
Drake Newt	Lizard Venom Spit	Toad Hop Jump	Wearing Wristband	Spikey Orange	Fear of Water Blocks
Jordan Jam	Lizard Venom Spit	Enderman Teleport	No Wristband	Spikey Orange	Fear of Water Blocks
Herby Skink	Lizard Venom Spit	Four String Plucking	Wearing Wristband	Purple Pixie	Squeaky Shoes
Luka Geck	Redstone Jump Shot	Fire Resistance	Wearing Wristband	Purple Pixie	Fear of Water Blocks
Basil Boa	Ukulele Strumming	Toad Hop Jump	Wearing Wristband	Spikey Orange	Out of Tune G String
Spike Cobra	Ukulele Strumming	Double Dribbling	Wearing Wristband	Spikey Orange	Fear of Water Blocks
Yoshi Ukes	Creeper Block Building	Enderman Teleport	No Wristband	Spikey Orange	Fear of Water Blocks
Paige Pad	Scale Camouflage	Fire Resistance	No Wristband	Purple Pixie	Fear of Water Blocks
Reggie Ring	Lizard Venom Spit	Fire Resistance	Wearing Wristband	Purple Pixie	Out of Tune G String
Giannis Gator	Scale Camouflage	Double Dribbling	Wearing Wristband	Spikey Orange	Fear of Water Blocks
Bindi Python	Creeper Block Building	Fire Resistance	No Wristband	Spikey Orange	Squeaky Shoes
Kyrie Lizard	Lizard Venom Spit	Enderman Teleport	No Wristband	Spikey Orange	Out of Tune G String
Alex Craft	Lizard Venom Spit	Enderman Teleport	Wearing Wristband	Spikey Orange	Fear of Water Blocks
Steph Scale	Redstone Jump Shot	Toad Hop Jump	Wearing Wristband	Purple Pixie	Out of Tune G String
Stampy Tail	Lizard Venom Spit	Four String Plucking	Wearing Wristband	Spikey Orange	Fear of Water Blocks

CLUE 1

We found a glowing keypad on the court. To open it, we must find the value of the digit in the tens place on this broken screen.

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

The diagram consists of two rows of boxes. The top row has 18 boxes, and the bottom row has 14 boxes. The boxes are arranged in a sequence, with some boxes shaded orange and containing the letter 'T', and others white and empty. Below each box is a numerical value.

Box Color	Box Content	Value
Orange	T	800
White		1000
White		100
White		3000
White		10
White		3000
White		600
White		100
White		8000
Orange	T	800
White		5000
White		900
White		100
White		3000
White		7000
White		900
Orange	T	800
White		5000
White		900
White		10
White		4000
White		80
White		100
White		5000
White		70
White		30
White		4000
White		4000
White		80
White		100

What is the value of the 8 in 300,815? → **T**

What is the value of the 7 in 34,678? → **R**

What is the value of the 8 in 599,280? →

What is the value of the 3 in 643,105? → **S**

What is the value of the 1 in 948,155? → **E**

What is the value of the 7 in 397,984? → **N**

What is the value of the 1 in 41,778? → **H**

What is the value of the 1 in 505,212? →

What is the value of the 5 in 75,466? → **D**

What is the value of the 8 in 38,715? → **C**

What is the value of the 3 in 47,238? →

What is the value of the 6 in 751,633? → **P**

What is the value of the 9 in 301,958? →

What is the value of the 4 in 154,893? → **B**

Scratch space:

CLUE 2 Rounding

The guard saw a pile of green blocks blocking the exit. The guard could only estimate and round the total to the nearest ten to clear the path.

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

A									A			A					A	
290	170	130	9000	1300	3000	370	170	3000	290	1300	5000	290	1100	300	170	290	370	
									A									
300	7000	1700	700	700	3000	300	1100	3000	290	7000	1300	130	3000	130	1700	1700	700	

Round 287 to the nearest ten → **A**

Round 691 to the nearest hundred → **P**

Round 295 to the nearest hundred → **D**

Round 3,354 to the nearest thousand → **E**

Round 1,071 to the nearest hundred → **N**

Round 6,719 to the nearest thousand → **R**

Round 5,294 to the nearest thousand → **B**

Round 126 to the nearest ten → **H**

Round 1,253 to the nearest hundred → **T**

Round 9,376 to the nearest thousand → **I**

Round 1,698 to the nearest hundred → **O**

Round 168 to the nearest ten → **W**

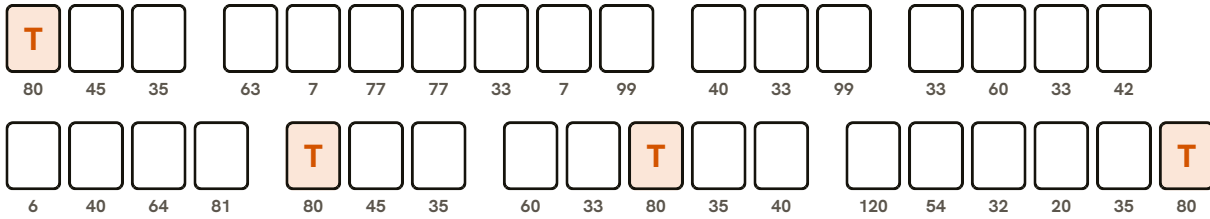
Round 366 to the nearest ten → **S**

Scratch space:

CLUE 3
Multiplication facts (1-12)

We found racks of basketballs arranged in equal rows. Let us multiply the rows by the columns to see how many balls are missing.

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



$10 \times 8 = \square \rightarrow \text{**T**}$

$7 \times 1 = \square \rightarrow \text{**I**}$

$11 \times 3 = \square \rightarrow \text{**A**}$

$10 \times 12 = \square \rightarrow \text{**B**}$

$5 \times 7 = \square \rightarrow \text{**E**}$

$9 \times 9 = \square \rightarrow \text{**M**}$

$5 \times 4 = \square \rightarrow \text{**K**}$

$7 \times 6 = \square \rightarrow \text{**Y**}$

$9 \times 11 = \square \rightarrow \text{**N**}$

$8 \times 8 = \square \rightarrow \text{**O**}$

$5 \times 9 = \square \rightarrow \text{**H**}$

$4 \times 8 = \square \rightarrow \text{**C**}$

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

$5 \times 8 = \square \rightarrow \text{**R**}$

$1 \times 6 = \square \rightarrow \text{**F**}$

$6 \times 9 = \square \rightarrow \text{**U**}$

$9 \times 7 = \square \rightarrow \text{**V**}$

$12 \times 5 = \square \rightarrow \text{**W**}$

Scratch space:

CLUE 4 Addition

The referee found several lists of lizard food. Add up all the crickets on the lists to find the grand total.

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

S									S								S			
3314	6384	8867	9700	5118	4024	3925	5118	8602	3314	9674	5856	5718	5573	8970	9624	3314	4107	5777	5118	
										S						S				
4107	4024	5856	6243	5573	5118	8970	5856	8867	4024	3314	6384	8867	5042	5118	3314					

$2168 + 1146 = \square \rightarrow$ S	$2545 + 3311 = \square \rightarrow$ A	$1818 + 2107 = \square \rightarrow$ W
$1445 + 2662 = \square \rightarrow$ O	$2792 + 3592 = \square \rightarrow$ P	$3561 + 2216 = \square \rightarrow$ M
$5572 + 4102 = \square \rightarrow$ C	$6137 + 2730 = \square \rightarrow$ I	$3467 + 6157 = \square \rightarrow$ T
$2707 + 1317 = \square \rightarrow$ R	$3125 + 2593 = \square \rightarrow$ U	$3283 + 5319 = \square \rightarrow$ B
$4550 + 4420 = \square \rightarrow$ H	$1921 + 3121 = \square \rightarrow$ K	$3447 + 1671 = \square \rightarrow$ E
$4201 + 5499 = \square \rightarrow$ D	$3621 + 1952 = \square \rightarrow$ G	$3174 + 3069 = \square \rightarrow$ N

Scratch space:

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

We found a box of ukulele strings. If we divide them equally among the team members, we can find out who took the extra strings.

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:

$48 \div 6 = \boxed{}$

$33 \div 11 = \boxed{}$

$110 \div 10 = \boxed{}$

$14 \div 2 = \boxed{}$

$24 \div 4 = \boxed{}$

$50 \div 5 = \boxed{}$

$144 \div 12 = \boxed{}$

$45 \div 9 = \boxed{}$

$36 \div 9 = \boxed{}$

$20 \div 10 = \boxed{}$

$27 \div 3 = \boxed{}$

Step 2 - cross out the sentence with each answer:

1. The villain builds a wall of mossy bricks, then teleports behind the basket.
2. The villain builds a wall of mossy bricks, then leaps high like a giant toad.
3. The villain shoots slimy green lizard spit, then strums four nylon strings quickly.
4. The villain uses sneaky scale camouflage, then bounces two game balls at once.
5. The villain uses sneaky scale camouflage, then leaps high like a giant toad.
6. The villain makes a blocky redstone jump shot, then strums four nylon strings quickly.
7. The villain builds a wall of mossy bricks, then walks right through a lava trap.
8. The villain shoots slimy green lizard spit, then teleports behind the basket.
9. The villain shoots slimy green lizard spit, then bounces two game balls at once.
10. The villain makes a blocky redstone jump shot, then bounces two game balls at once.
11. The villain shoots slimy green lizard spit, then leaps high like a giant toad.
12. The villain uses sneaky scale camouflage, then strums four nylon strings quickly.

Answer Key

The Mystery of the Mossy Hoop

Culprit: Devin Dart

Creeper Block Building · Enderman Teleport · Wearing Wristband · Spikey Orange · Fear of Water Blocks

Trail: Start 21 → Clue 1 18 → Clue 2 12 → Clue 3 5 → Clue 4 4 → Clue 5 1

Clue 1 (Place value): "THE SUSPECT DOES NOT DOUBLE DRIBBLE"

What is the value of the 8 in 300,815? = 800 (T) · What is the value of the 7 in 34,678? = 70 (R) · What is the value of the 8 in 599,280? = 80 (L) · What is the value of the 3 in 643,105? = 3000 (S) · What is the value of the 1 in 948,155? = 100 (E) · What is the value of the 7 in 397,984? = 7000 (N) · What is the value of the 1 in 41,778? = 1000 (H) · What is the value of the 1 in 505,212? = 10 (U) · What is the value of the 5 in 75,466? = 5000 (D) · What is the value of the 8 in 38,715? = 8000 (C) · What is the value of the 3 in 47,238? = 30 (I) · What is the value of the 6 in 751,633? = 600 (P) · What is the value of the 9 in 301,958? = 900 (O) · What is the value of the 4 in 154,893? = 4000 (B)

Clue 2 (Rounding): "A WHITE SWEATBAND WAS DROPPED NEAR THE HOOP"

Round 287 to the nearest ten = 290 (A) · Round 691 to the nearest hundred = 700 (P) · Round 295 to the nearest hundred = 300 (D) · Round 3,354 to the nearest thousand = 3000 (E) · Round 1,071 to the nearest hundred = 1100 (N) · Round 6,719 to the nearest thousand = 7000 (R) · Round 5,294 to the nearest thousand = 5000 (B) · Round 126 to the nearest ten = 130 (H) · Round 1,253 to the nearest hundred = 1300 (T) · Round 9,376 to the nearest thousand = 9000 (I) · Round 1,698 to the nearest hundred = 1700 (O) · Round 168 to the nearest ten = 170 (W) · Round 366 to the nearest ten = 370 (S)

Clue 3 (Multiplication facts (1-12)): "THE VILLAIN RAN AWAY FROM THE WATER BUCKET"

$10 \times 8 = 80$ (T) · $7 \times 1 = 7$ (I) · $11 \times 3 = 33$ (A) · $10 \times 12 = 120$ (B) · $5 \times 7 = 35$ (E) · $9 \times 9 = 81$ (M) · $5 \times 4 = 20$ (K) · $7 \times 6 = 42$ (Y) · $9 \times 11 = 99$ (N) · $8 \times 8 = 64$ (O) · $5 \times 9 = 45$ (H) · $4 \times 8 = 32$ (C) · $11 \times 7 = 77$ (L) · $5 \times 8 = 40$ (R) · $1 \times 6 = 6$ (F) · $6 \times 9 = 54$ (U) · $9 \times 7 = 63$ (V) · $12 \times 5 = 60$ (W)

Clue 4 (Addition): "SPIDERWEBS CAUGHT SOME ORANGE HAIR SPIKES"

$2168 + 1146 = 3314$ (S) · $2545 + 3311 = 5856$ (A) · $1818 + 2107 = 3925$ (W) · $1445 + 2662 = 4107$ (O) · $2792 + 3592 = 6384$ (P) · $3561 + 2216 = 5777$ (M) · $5572 + 4102 = 9674$ (C) · $6137 + 2730 = 8867$ (I) · $3467 + 6157 = 9624$ (T) · $2707 + 1317 = 4024$ (R) · $3125 + 2593 = 5718$ (U) · $3283 + 5319 = 8602$ (B) · $4550 + 4420 = 8970$ (H) · $1921 + 3121 = 5042$ (K) · $3447 + 1671 = 5118$ (E) · $4201 + 5499 = 9700$ (D) · $3621 + 1952 = 5573$ (G) · $3174 + 3069 = 6243$ (N)

Clue 5 (Division facts (1-12)): surviving statement is box 1 → Devin Dart

$48 \div 6 = 8$ · $33 \div 11 = 3$ · $110 \div 10 = 11$ · $14 \div 2 = 7$ · $24 \div 4 = 6$ · $50 \div 5 = 10$ · $144 \div 12 = 12$ · $45 \div 9 = 5$ · $36 \div 9 = 4$ · $20 \div 10 = 2$ · $27 \div 3 = 9$