The Mystery of the Missing Golden Dino Trophy

Grade 5 math · Multiplication, Word problems, Fractions of a number, Order of operations, Division · Reading level grades 3-4

Detective: _____ **Date:** _____

The annual Dino-Bowling Championship was about to begin when the solid gold Brachiosaurus trophy disappeared from its display case! Someone snuck past the lane monitors using clever tricks. Figure out which prehistoric bowler snatched the trophy before the final frame!

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 Golden Trophy Thief is _____

Possible suspects

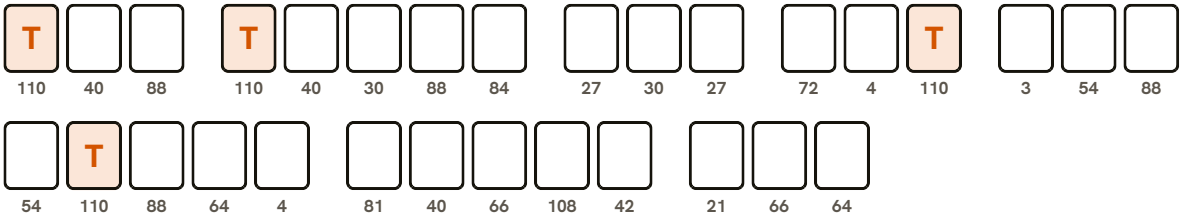
Cross off a row as each clue rules it out. The one left at the end is the culprit.

NAME	SIGNATURE SHOT	DINO GEAR	BOWLING HAND	FEATHER CREST	DISTRACTION TRIGGER
Penny Pterodactyl	Power Blast	Stego Chalk Bag	Left Handed	Flame Orange	Squeaky Shoes
Cory Corytho	Curve Roll	Raptor Shoes	Right Handed	Flame Orange	Loud Buzzer
Carnotaur Carl	Spinning Hook	Stego Chalk Bag	Right Handed	Neon Green	Shiny Pins
Deino Dave	Spinning Hook	Tricera Towel	Left Handed	Flame Orange	Squeaky Shoes
Oviraptor Ollie	Curve Roll	Ankylo Grip	Right Handed	Flame Orange	Squeaky Shoes
Baryonyx Barry	Split Spare	T-Rex Wrist Guard	Left Handed	Flame Orange	Loud Buzzer
Iggy Iguanodon	Gutter Bounce	Ankylo Grip	Right Handed	Cobalt Blue	Shiny Pins
Pachy Pete	Split Spare	Ankylo Grip	Left Handed	Cobalt Blue	Shiny Pins
Maiasaura Mary	Gutter Bounce	Stego Chalk Bag	Left Handed	Neon Green	Squeaky Shoes
Gallimimus Gabe	Gutter Bounce	T-Rex Wrist Guard	Right Handed	Cobalt Blue	Squeaky Shoes
Ally Allosaurus	Split Spare	T-Rex Wrist Guard	Left Handed	Flame Orange	Squeaky Shoes
Diplodocus Don	Power Blast	Tricera Towel	Left Handed	Flame Orange	Squeaky Shoes
Anky Andy	Curve Roll	Tricera Towel	Right Handed	Flame Orange	Squeaky Shoes
Sammy Stego	Curve Roll	Ankylo Grip	Left Handed	Cobalt Blue	Shiny Pins
Para Patty	Spinning Hook	Tricera Towel	Right Handed	Neon Green	Loud Buzzer
Dino Dan	Split Spare	Stego Chalk Bag	Right Handed	Neon Green	Squeaky Shoes
Trixie Trike	Gutter Bounce	T-Rex Wrist Guard	Right Handed	Neon Green	Squeaky Shoes
Sucho Sue	Gutter Bounce	Tricera Towel	Left Handed	Neon Green	Squeaky Shoes
Spino Sally	Spinning Hook	Raptor Shoes	Left Handed	Cobalt Blue	Shiny Pins
Velma Raptor	Spinning Hook	Ankylo Grip	Left Handed	Neon Green	Loud Buzzer
Troodon Tim	Power Blast	Raptor Shoes	Left Handed	Flame Orange	Squeaky Shoes

CLUE 1 Multiplication facts (1-12)

> We found crates of spare bowling pins stacked near the crime scene and multiplied the rows to count them.

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



10 × 11 = ☐ → T

4 × 1 = ☐ → O

9 × 9 = ☐ → C

7 × 12 = ☐ → F

1 × 3 = ☐ → U

5 × 8 = ☐ → H

8 × 8 = ☐ → G

9 × 3 = ☐ → D

9 × 8 = ☐ → N

3 × 10 = ☐ → I

11 × 6 = ☐ → A

9 × 6 = ☐ → S

7 × 6 = ☐ → K

7 × 3 = ☐ → B

12 × 9 = ☐ → L

11 × 8 = ☐ → E

Scratch space:

CLUE 2 Word problems

The bowling alley manager needed help solving word problems about missing arcade tokens and dino snacks.

Solve each problem, then write its letter in the boxes to fill in the missing word.

A witness saw the villain was

L							D		D
90	53	33	115	88	20	74		53	

.

Coach Rex found 13 dino snacks yesterday and 77 more today. How many dino snacks in all?

Answer: ☐ → **L**

Coach Rex lined up 11 rows of 8 arcade tokens. How many arcade tokens in all?

Answer: ☐ → **H**

Coach Rex lined up 11 rows of 3 arcade tokens. How many arcade tokens in all?

Answer: ☐ → **F**

Coach Rex found 31 bowling balls yesterday and 43 more today. How many bowling balls in all?

Answer: ☐ → **N**

Coach Rex lined up 4 rows of 5 arcade tokens. How many arcade tokens in all?

Answer: ☐ → **A**

Coach Rex found 60 dino snacks yesterday and 55 more today. How many dino snacks in all?

Answer: ☐ → **T**

There were 93 bowling balls. 40 were used up. How many bowling balls are left?

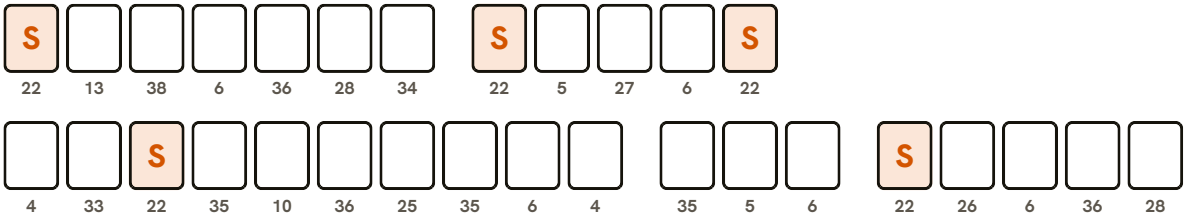
Answer: ☐ → **E**

Scratch space:

CLUE 3 Fractions of a number

> Only a fraction of the scoreboard lights were working after the thief tampered with the main breaker.

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



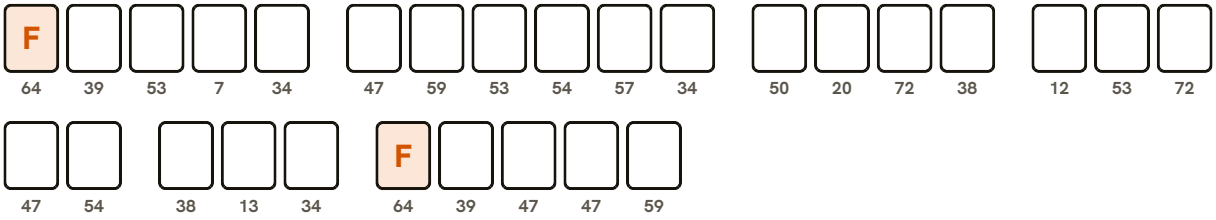
1/8 of 176 = ☐ → S	2/10 of 125 = ☐ → C	1/3 of 84 = ☐ → K
1/3 of 108 = ☐ → A	4/10 of 10 = ☐ → D	4/8 of 54 = ☐ → O
3/6 of 12 = ☐ → E	3/10 of 110 = ☐ → I	2/10 of 50 = ☐ → R
4/8 of 10 = ☐ → H	1/4 of 52 = ☐ → Q	5/8 of 56 = ☐ → T
5/10 of 68 = ☐ → Y	1/5 of 190 = ☐ → U	3/6 of 52 = ☐ → N

Scratch space:

CLUE 4 Order of operations

To unlock the pinsetter computer room, we had to solve a security code using the order of operations.

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



12 × 6 - 8 = ☐ → F	8 × 7 - 22 = ☐ → E	49 + 2 × 2 = ☐ → A
46 + 2 × 4 = ☐ → N	35 + 6 × 4 = ☐ → R	11 + 6 × 6 = ☐ → O
10 × 8 - 8 = ☐ → S	18 + 4 × 5 = ☐ → T	4 × 12 - 9 = ☐ → L
44 + 3 × 2 = ☐ → D	10 × 6 - 3 = ☐ → G	7 × 5 - 15 = ☐ → U
1 + 6 × 2 = ☐ → H	6 + 2 × 3 = ☐ → W	3 + 2 × 2 = ☐ → M

Scratch space:

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

> We divided the remaining neon bowling balls equally among the search teams to inspect for hidden clues.

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:

40 ÷ 4 = ☐	11 ÷ 11 = ☐	50 ÷ 10 = ☐	36 ÷ 3 = ☐	45 ÷ 5 = ☐
32 ÷ 8 = ☐	88 ÷ 11 = ☐	12 ÷ 6 = ☐	70 ÷ 10 = ☐	11 ÷ 1 = ☐
6 ÷ 1 = ☐				

Step 2 - cross out the sentence with each answer:

1. The villain threw a spinning hook, then wiped down with a tricera towel.
2. The villain launched a power blast, then dusted with a stego chalk bag.
3. The villain launched a power blast, then laced up raptor shoes.
4. The villain executed a gutter bounce, then laced up raptor shoes.
5. The villain launched a power blast, then wiped down with a tricera towel.
6. The villain threw a spinning hook, then used an ankylo grip.
7. The villain executed a gutter bounce, then wiped down with a tricera towel.
8. The villain rolled a curve shot, then wiped down with a tricera towel.
9. The villain launched a power blast, then used an ankylo grip.
10. The villain picked up a split spare, then strapped on a t-rex wrist guard.
11. The villain executed a gutter bounce, then dusted with a stego chalk bag.
12. The villain rolled a curve shot, then strapped on a t-rex wrist guard.

TEACHER / PARENT

Answer Key

The Mystery of the Missing Golden Dino Trophy

Culprit: Troodon Tim

Power Blast · Raptor Shoes · Left Handed · Flame Orange · Squeaky Shoes

Trail: Start 21 → Clue 1 17 → Clue 2 10 → Clue 3 5 → Clue 4 4 → Clue 5 1

Clue 1 (Multiplication facts (1-12)): "THE THIEF DID NOT USE STEGO CHALK BAG"

10 × 11 = 110 (T) · 4 × 1 = 4 (O) · 9 × 9 = 81 (C) · 7 × 12 = 84 (F) · 1 × 3 = 3 (U) · 5 × 8 = 40 (H) · 8 × 8 = 64 (G) · 9 × 3 = 27 (D) · 9 × 8 = 72 (N) · 3 × 10 = 30 (I) · 11 × 6 = 66 (A) · 9 × 6 = 54 (S) · 7 × 6 = 42 (K) · 7 × 3 = 21 (B) · 12 × 9 = 108 (L) · 11 × 8 = 88 (E)

Clue 2 (Word problems): "LEFT HANDED"

Coach Rex found 13 dino snacks yesterday and 77 more today. How many dino snacks in all? = 90 (L) · Coach Rex lined up 11 rows of 8 arcade tokens. How many arcade tokens in all? = 88 (H) · Coach Rex lined up 11 rows of 3 arcade tokens. How many arcade tokens in all? = 33 (F) · Coach Rex found 31 bowling balls yesterday and 43 more today. How many bowling balls in all? = 74 (N) · Coach Rex lined up 4 rows of 5 arcade tokens. How many arcade tokens in all? = 20 (A) · Coach Rex found 60 dino snacks yesterday and 55 more today. How many dino snacks in all? = 115 (T) · There were 93 bowling balls. 40 were used up. How many bowling balls are left? = 53 (E)

Clue 3 (Fractions of a number): "SQUEAKY SHOES DISTRACTED THE SNEAK"

1/8 of 176 = 22 (S) · 2/10 of 125 = 25 (C) · 1/3 of 84 = 28 (K) · 1/3 of 108 = 36 (A) · 4/10 of 10 = 4 (D) · 4/8 of 54 = 27 (O) · 3/6 of 12 = 6 (E) · 3/10 of 110 = 33 (I) · 2/10 of 50 = 10 (R) · 4/8 of 10 = 5 (H) · 1/4 of 52 = 13 (Q) · 5/8 of 56 = 35 (T) · 5/10 of 68 = 34 (Y) · 1/5 of 190 = 38 (U) · 3/6 of 52 = 26 (N)

Clue 4 (Order of operations): "FLAME ORANGE DUST WAS ON THE FLOOR"

12 × 6 - 8 = 64 (F) · 8 × 7 - 22 = 34 (E) · 49 + 2 × 2 = 53 (A) · 46 + 2 × 4 = 54 (N) · 35 + 6 × 4 = 59 (R) · 11 + 6 × 6 = 47 (O) · 10 × 8 - 8 = 72 (S) · 18 + 4 × 5 = 38 (T) · 4 × 12 - 9 = 39 (L) · 44 + 3 × 2 = 50 (D) · 10 × 6 - 3 = 57 (G) · 7 × 5 - 15 = 20 (U) · 1 + 6 × 2 = 13 (H) · 6 + 2 × 3 = 12 (W) · 3 + 2 × 2 = 7 (M)

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

40 ÷ 4 = 10 · 11 ÷ 11 = 1 · 50 ÷ 10 = 5 · 36 ÷ 3 = 12 · 45 ÷ 5 = 9 · 32 ÷ 8 = 4 · 88 ÷ 11 = 8 · 12 ÷ 6 = 2 · 70 ÷ 10 = 7 · 11 ÷ 1 = 11 · 6 ÷ 1 = 6