The Mystery of the Missing Spinosaurus Tooth

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

Detective: _____ **Date:** _____

A rare prehistoric specimen vanished from the main dig site overnight. The clue log holds clues to identify who took it.

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 fossil thief is _____

Possible suspects

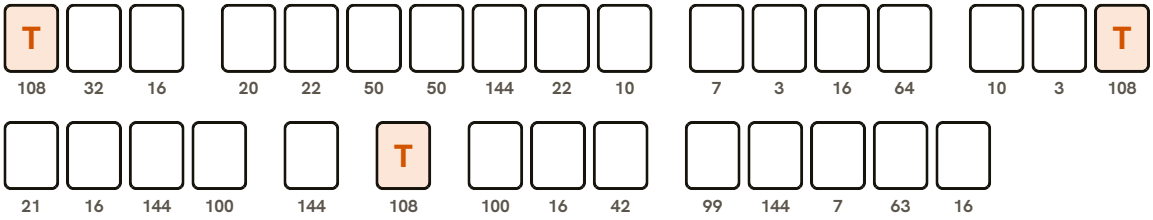
Cross off a row as each clue rules it out. The one left at the end is the culprit.

NAME	PRIMARY TOOL	SPECIALTY BADGE	DOMINANT HAND	HAIR STYLE	SCENT DISLIKE
Richard Owen	Fossil Scanner	Raptor Badge	RIGHT HANDED	LONG HAIR	PEPPER SCENT
Paul Sereno	Plaster Kit	Tracker Badge	RIGHT HANDED	SHORT HAIR	CITRUS SCENT
Kristina Curry	Rock Hammer	T Rex Badge	LEFT HANDED	SHORT HAIR	PEPPER SCENT
Patricia Vickers	Plaster Kit	Raptor Badge	LEFT HANDED	LONG HAIR	CITRUS SCENT
Jack Horner	Rock Hammer	Fossil Badge	LEFT HANDED	LONG HAIR	PEPPER SCENT
Sue Hendrickson	Plaster Kit	Amber Badge	LEFT HANDED	SHORT HAIR	CITRUS SCENT
Thomas Holtz	Plaster Kit	Tracker Badge	RIGHT HANDED	LONG HAIR	PEPPER SCENT
Xu Xing	Fossil Scanner	Tracker Badge	RIGHT HANDED	CURLY HAIR	PEPPER SCENT
Othniel Marsh	Chiseling Rig	Tracker Badge	RIGHT HANDED	CURLY HAIR	MINT SCENT
Edward Cope	Rock Hammer	Tracker Badge	RIGHT HANDED	LONG HAIR	MINT SCENT
Jack Sepkoski	Rock Hammer	T Rex Badge	RIGHT HANDED	CURLY HAIR	PEPPER SCENT
Philip Currie	Chiseling Rig	Fossil Badge	LEFT HANDED	SHORT HAIR	MINT SCENT
Bob Bakker	Fossil Scanner	Fossil Badge	LEFT HANDED	LONG HAIR	PEPPER SCENT
Roy Chapman	Rock Hammer	Amber Badge	RIGHT HANDED	SHORT HAIR	PEPPER SCENT
Barnum Brown	Plaster Kit	T Rex Badge	RIGHT HANDED	LONG HAIR	PEPPER SCENT
Mary Anning	Chiseling Rig	Amber Badge	RIGHT HANDED	LONG HAIR	PEPPER SCENT
Lindsay Zanno	Plaster Kit	Tracker Badge	LEFT HANDED	LONG HAIR	CITRUS SCENT
Alan Grant	Chiseling Rig	Fossil Badge	RIGHT HANDED	LONG HAIR	PEPPER SCENT
Ian Malcolm	Drone Radar	Amber Badge	LEFT HANDED	CURLY HAIR	PEPPER SCENT
Ellie Sattler	Plaster Kit	Amber Badge	RIGHT HANDED	CURLY HAIR	CITRUS SCENT
Diego Pol	Chiseling Rig	T Rex Badge	RIGHT HANDED	CURLY HAIR	PEPPER SCENT

CLUE 1 Multiplication facts (1-12)

Dr. Grant organized the fossil crates into equal rows to tally the total supply before checking the clue.

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



12 × 9 = ☐ → T	11 × 2 = ☐ → I	7 × 1 = ☐ → D	
8 × 8 = ☐ → S	7 × 9 = ☐ → G	3 × 7 = ☐ → W	7 × 6 = ☐ → X
10 × 5 = ☐ → L	10 × 1 = ☐ → N	2 × 8 = ☐ → E	
10 × 10 = ☐ → R	4 × 5 = ☐ → V	11 × 9 = ☐ → B	
1 × 3 = ☐ → O	8 × 4 = ☐ → H	12 × 12 = ☐ → A	

Scratch space:

CLUE 2 Fractions of a number

The team analyzed a set batch of rock samples and took a fraction of them for testing.

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

T										T									
16	35	2		12	4	12	6	2	37	16		28	36	14	6	6	2	28		34

T							T							T					
16	14	14	21		33	9	16	35		36	9	7	35	16		35	34	11	28

1/3 of 48 = ☐ → **T**

2/4 of 66 = ☐ → **W**

6/10 of 20 = ☐ → **S**

1/5 of 185 = ☐ → **C**

1/6 of 66 = ☐ → **N**

3/6 of 4 = ☐ → **E**

7/10 of 40 = ☐ → **D**

1/8 of 72 = ☐ → **I**

1/4 of 28 = ☐ → **G**

1/5 of 170 = ☐ → **A**

4/8 of 70 = ☐ → **H**

1/3 of 18 = ☐ → **P**

1/4 of 84 = ☐ → **L**

3/8 of 96 = ☐ → **R**

3/6 of 8 = ☐ → **U**

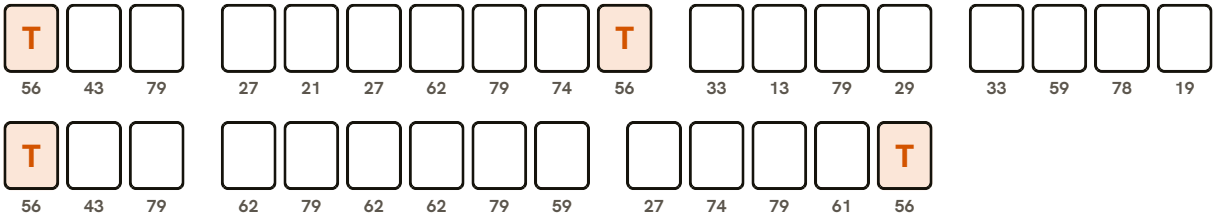
1/2 of 28 = ☐ → **O**

Scratch space:

CLUE 3 Order of operations

To unlock the lab computer, the researchers followed a multi-step formula in the correct order.

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



10 × 7 - 14 = ☐ → T

43 + 4 × 9 = ☐ → E

6 + 9 × 3 = ☐ → F

9 × 3 - 8 = ☐ → M

11 × 8 - 14 = ☐ → C

27 + 8 × 4 = ☐ → R

7 × 2 - 1 = ☐ → L

5 × 7 - 14 = ☐ → U

53 + 2 × 4 = ☐ → N

21 + 3 × 2 = ☐ → S

19 + 4 × 6 = ☐ → H

22 + 8 × 5 = ☐ → P

9 × 11 - 21 = ☐ → O

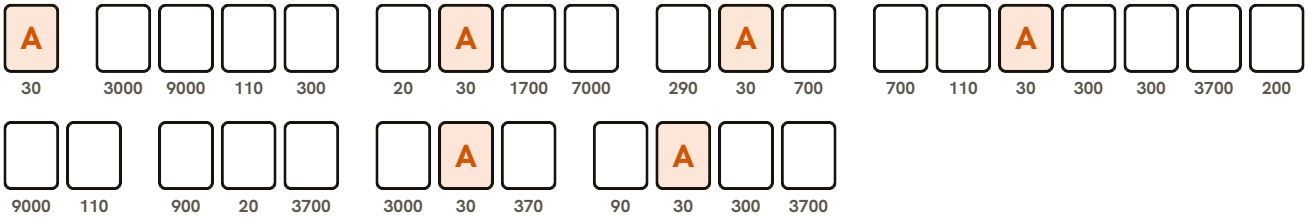
9 + 4 × 5 = ☐ → D

Scratch space:

CLUE 4 Rounding

The digital scale could only display rounded estimates of the heavy fossil weights.

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



Round 34 to the nearest ten ☐ → A

Round 6,665 to the nearest thousand ☐ → R

Round 89 to the nearest ten ☐ → C

Round 111 to the nearest ten ☐ → N

Round 3,744 to the nearest hundred ☐ → E

Round 291 to the nearest ten ☐ → W

Round 1,744 to the nearest hundred ☐ → I

Round 2,856 to the nearest thousand ☐ → L

Round 927 to the nearest hundred ☐ → T

Round 729 to the nearest hundred ☐ → S

Round 17 to the nearest ten ☐ → H

Round 256 to the nearest hundred ☐ → G

Round 188 to the nearest hundred ☐ → D

Round 374 to the nearest ten ☐ → B

Round 8,559 to the nearest thousand ☐ → O

Scratch space:

CLUE 5 Fractions of a number - the last clue

> The trackway map showed many dinosaur footprints, but only a fraction was clear enough to read.

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:

2/5 of 20 = ☐	1/8 of 56 = ☐	2/5 of 5 = ☐	3/10 of 20 = ☐
2/6 of 15 = ☐	2/8 of 44 = ☐	2/4 of 20 = ☐	1/2 of 18 = ☐
4/6 of 6 = ☐	1/5 of 5 = ☐	2/10 of 60 = ☐	

Step 2 - cross out the sentence with each answer:

1. The villain chiseled through the stone layer, then showed off a t rex badge.
2. The villain applied a quick plaster cast, then wore a tracker badge.
3. The villain scanned the fossil bedrock, then pinned on a raptor badge.
4. The villain scanned the fossil bedrock, then flashed an amber badge.
5. The villain scanned the fossil bedrock, then displayed a fossil badge.
6. The villain chiseled through the stone layer, then pinned on a raptor badge.
7. The villain chiseled through the stone layer, then displayed a fossil badge.
8. The villain chiseled through the stone layer, then flashed an amber badge.
9. The villain scanned the fossil bedrock, then wore a tracker badge.
10. The villain applied a quick plaster cast, then displayed a fossil badge.
11. The villain flew a drone radar scanner, then flashed an amber badge.
12. The villain swung a heavy rock hammer, then displayed a fossil badge.

TEACHER / PARENT

Answer Key

The Mystery of the Missing Spinosaurus Tooth

Culprit: Richard Owen

Fossil Scanner · Raptor Badge · RIGHT HANDED · LONG HAIR · PEPPER SCENT

Trail: Start 21 → Clue 1 17 → Clue 2 10 → Clue 3 6 → Clue 4 4 → Clue 5 1

Clue 1 (Multiplication facts (1-12)): "THE VILLAIN DOES NOT WEAR A T REX BADGE"

12 × 9 = 108 (T) · 11 × 2 = 22 (I) · 7 × 1 = 7 (D) · 8 × 8 = 64 (S) · 7 × 9 = 63 (G) · 3 × 7 = 21 (W) · 7 × 6 = 42 (X) · 10 × 5 = 50 (L) · 10 × 1 = 10 (N) · 2 × 8 = 16 (E) · 10 × 10 = 100 (R) · 4 × 5 = 20 (V) · 11 × 9 = 99 (B) · 1 × 3 = 3 (O) · 8 × 4 = 32 (H) · 12 × 12 = 144 (A)

Clue 2 (Fractions of a number): "THE SUSPECT DROPPED A TOOL WITH RIGHT HAND"

1/3 of 48 = 16 (T) · 2/4 of 66 = 33 (W) · 6/10 of 20 = 12 (S) · 1/5 of 185 = 37 (C) · 1/6 of 66 = 11 (N) · 3/6 of 4 = 2 (E) · 7/10 of 40 = 28 (D) · 1/8 of 72 = 9 (I) · 1/4 of 28 = 7 (G) · 1/5 of 170 = 34 (A) · 4/8 of 70 = 35 (H) · 1/3 of 18 = 6 (P) · 1/4 of 84 = 21 (L) · 3/8 of 96 = 36 (R) · 3/6 of 8 = 4 (U) · 1/2 of 28 = 14 (O)

Clue 3 (Order of operations): "THE SUSPECT FLED FROM THE PEPPER SCENT"

10 × 7 - 14 = 56 (T) · 43 + 4 × 9 = 79 (E) · 6 + 9 × 3 = 33 (F) · 9 × 3 - 8 = 19 (M) · 11 × 8 - 14 = 74 (C) · 27 + 8 × 4 = 59 (R) · 7 × 2 - 1 = 13 (L) · 5 × 7 - 14 = 21 (U) · 53 + 2 × 4 = 61 (N) · 21 + 3 × 2 = 27 (S) · 19 + 4 × 6 = 43 (H) · 22 + 8 × 5 = 62 (P) · 9 × 11 - 21 = 78 (O) · 9 + 4 × 5 = 29 (D)

Clue 4 (Rounding): "A LONG HAIR WAS SNAGGED ON THE LAB CAGE"

Round 34 to the nearest ten = 30 (A) · Round 6,665 to the nearest thousand = 7000 (R) · Round 89 to the nearest ten = 90 (C) · Round 111 to the nearest ten = 110 (N) · Round 3,744 to the nearest hundred = 3700 (E) · Round 291 to the nearest ten = 290 (W) · Round 1,744 to the nearest hundred = 1700 (I) · Round 2,856 to the nearest thousand = 3000 (L) · Round 927 to the nearest hundred = 900 (T) · Round 729 to the nearest hundred = 700 (S) · Round 17 to the nearest ten = 20 (H) · Round 256 to the nearest hundred = 300 (G) · Round 188 to the nearest hundred = 200 (D) · Round 374 to the nearest ten = 370 (B) · Round 8,559 to the nearest thousand = 9000 (O)

Clue 5 (Fractions of a number): surviving statement is box 3 → Richard Owen

2/5 of 20 = 8 · 1/8 of 56 = 7 · 2/5 of 5 = 2 · 3/10 of 20 = 6 · 2/6 of 15 = 5 · 2/8 of 44 = 11 · 2/4 of 20 = 10 · 1/2 of 18 = 9 · 4/6 of 6 = 4 · 1/5 of 5 = 1 · 2/10 of 60 = 12