The Great Dino Fossil Mystery

Grade 2 math · Addition, Subtraction, Multiplication, Place value, Missing addends · Reading level grades 1-2

Detective: _____ **Date:** _____

A rare glowing amber egg has gone missing from the Dino Discovery Museum! Work with the Fossil Patrol to gather clues, solve math puzzles, and unmask the thief.

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.

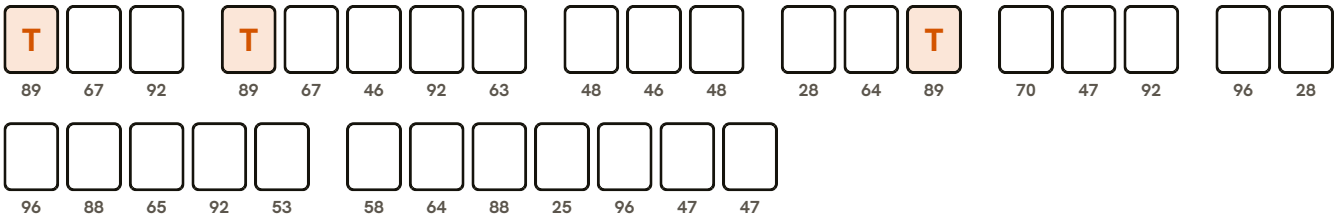
NAME	DINO MASK	GADGET	STANCE	FEATHER COLOR	FAVORITE SNACK
Maya Mastodon	Raptor Boots	Fossil Brush	Left-handed grip	Gold feathers	Crunchy Ferns
Bruno Brachio	Tricera Horns	Fossil Brush	Left-handed grip	Green feathers	Sweet Berries
Chloe Claw	Stego Shield	Lava Flashlight	Left-handed grip	Gold feathers	Crunchy Ferns
Ranger Rex	Ptero Wings	Lava Flashlight	Left-handed grip	Gold feathers	Crunchy Ferns
Sandy Stone	Stego Shield	Amber Compass	Left-handed grip	Green feathers	Salty Seeds
Leo Lithos	Tricera Horns	Amber Compass	Left-handed grip	Gold feathers	Crunchy Ferns
Bone Bob	Tricera Horns	Amber Compass	Left-handed grip	Red feathers	Sweet Berries
Digging Doug	Ptero Wings	Vine Rope	Right-handed grip	Green feathers	Salty Seeds
Raptor Ray	Tricera Horns	Lava Flashlight	Left-handed grip	Gold feathers	Sweet Berries
Tracker Tara	Rex Helmet	Fossil Brush	Left-handed grip	Green feathers	Crunchy Ferns
Penny Paleo	Stego Shield	Fossil Brush	Right-handed grip	Gold feathers	Crunchy Ferns
Scout Sam	Tricera Horns	Amber Compass	Left-handed grip	Green feathers	Salty Seeds
Pete Pterodactyl	Tricera Horns	Amber Compass	Left-handed grip	Gold feathers	Salty Seeds
Tina T Rex	Stego Shield	Fossil Brush	Left-handed grip	Red feathers	Sweet Berries
Iggy Iguanodon	Raptor Boots	Lava Flashlight	Right-handed grip	Green feathers	Sweet Berries
Dino Dan	Ptero Wings	Bone Scanner	Left-handed grip	Gold feathers	Crunchy Ferns
Valley Val	Stego Shield	Lava Flashlight	Left-handed grip	Gold feathers	Sweet Berries
Spino Steve	Stego Shield	Bone Scanner	Left-handed grip	Green feathers	Crunchy Ferns
Toby Tricera	Tricera Horns	Lava Flashlight	Right-handed grip	Red feathers	Sweet Berries
Cam Cave	Tricera Horns	Fossil Brush	Left-handed grip	Green feathers	Crunchy Ferns
Amber Arch	Ptero Wings	Bone Scanner	Left-handed grip	Gold feathers	Salty Seeds

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CLUE 1 Addition

> Ranger Rex found two piles of fossil bones in the dirt lab. Add the bones in both piles together to unlock the first clue.

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



62 + 27 = ☐ → T

37 + 55 = ☐ → E

9 + 19 = ☐ → N

24 + 43 = ☐ → H

54 + 34 = ☐ → M

24 + 22 = ☐ → I

28 + 20 = ☐ → D

36 + 29 = ☐ → B

18 + 35 = ☐ → R

21 + 49 = ☐ → U

38 + 25 = ☐ → F

58 + 38 = ☐ → A

9 + 16 = ☐ → P

31 + 16 = ☐ → S

28 + 30 = ☐ → C

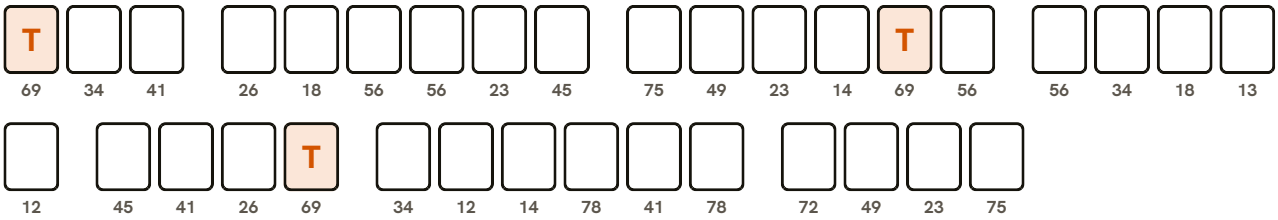
39 + 25 = ☐ → O

Scratch space:

CLUE 2 Subtraction

> Tracker Tara counted fossil footprints in the mud, but some got washed away by river water. Subtract to find the footprint count.

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



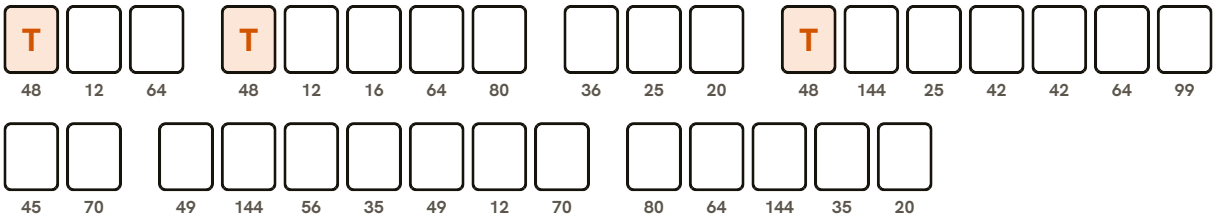
99 - 30 = ☐ → T	50 - 36 = ☐ → N	117 - 39 = ☐ → D
82 - 37 = ☐ → L	75 - 3 = ☐ → G	42 - 16 = ☐ → F
42 - 24 = ☐ → O	35 - 22 = ☐ → W	57 - 23 = ☐ → H
110 - 35 = ☐ → P	24 - 12 = ☐ → A	63 - 14 = ☐ → R
83 - 27 = ☐ → S	38 - 15 = ☐ → I	46 - 5 = ☐ → E

Scratch space:

CLUE 3 Multiplication facts (1-12)

> The museum has dino eggs arranged in equal rows on display shelves. Multiply the rows to reveal what was left behind.

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



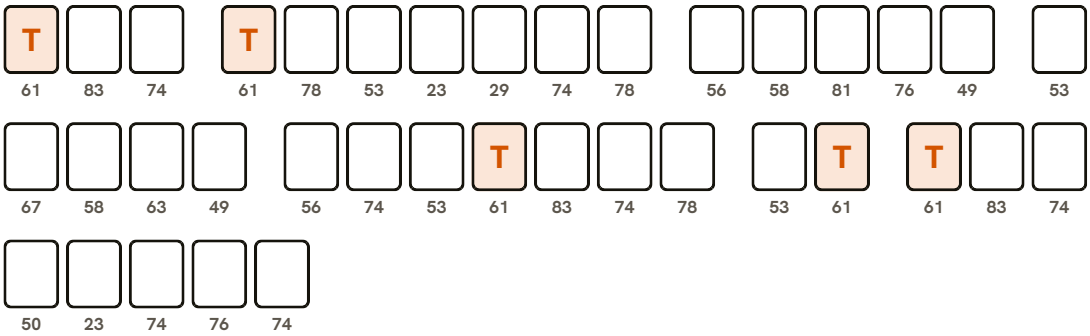
12 × 4 = ☐ → T	12 × 3 = ☐ → W	8 × 8 = ☐ → E	
5 × 5 = ☐ → A	6 × 7 = ☐ → P	7 × 7 = ☐ → C	9 × 5 = ☐ → B
4 × 5 = ☐ → S	3 × 4 = ☐ → H	10 × 8 = ☐ → F	2 × 8 = ☐ → I
10 × 7 = ☐ → Y	9 × 11 = ☐ → D	7 × 8 = ☐ → U	
12 × 12 = ☐ → R	5 × 7 = ☐ → N		

Scratch space:

CLUE 4 Place value

A keycard reader at the cave gate shows digits for hundreds, tens, and ones. Check the place values to read the passcode.

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



What number has 6 tens and 1 one? ☐ → T

What number has 7 tens and 8 ones? ☐ → R

What number has 6 tens and 3 ones? ☐ → L

What number has 8 tens and 3 ones? ☐ → H

What number has 8 tens and 1 one? ☐ → U

What number has 5 tens and 0 ones? ☐ → S

What number has 4 tens and 9 ones? ☐ → D

What number has 5 tens and 8 ones? ☐ → O

What number has 2 tens and 9 ones? ☐ → K

What number has 7 tens and 4 ones? ☐ → E

What number has 6 tens and 7 ones? ☐ → G

What number has 5 tens and 6 ones? ☐ → F

What number has 7 tens and 6 ones? ☐ → N

What number has 5 tens and 3 ones? ☐ → A

What number has 2 tens and 3 ones? ☐ → C

Scratch space:

CLUE 5 Missing addends - the last clue

> Scout Sam needs to fill a crate with heavy rocks, but some are missing. Find the missing amount to finish the case.

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:

1 + ___ = 8 ☐	6 + ___ = 11 ☐	5 + ___ = 15 ☐	6 + ___ = 9 ☐
1 + ___ = 10 ☐	9 + ___ = 20 ☐	3 + ___ = 4 ☐	2 + ___ = 10 ☐
3 + ___ = 7 ☐	6 + ___ = 8 ☐	7 + ___ = 13 ☐	

Step 2 - cross out the sentence with each answer:

1. The villain wore a rex helmet, then swung across the pit with a vine rope.
2. The villain strapped on tricera horns, then checked directions with an amber compass.
3. The villain strapped on tricera horns, then dusted off rocks with a fossil brush.
4. The villain wore a rex helmet, then dusted off rocks with a fossil brush.
5. The villain laced up raptor boots, then dusted off rocks with a fossil brush.
6. The villain laced up raptor boots, then checked directions with an amber compass.
7. The villain held a stego shield, then lit up the cave with a lava flashlight.
8. The villain held a stego shield, then dusted off rocks with a fossil brush.
9. The villain strapped on tricera horns, then scanned for clues with a bone scanner.
10. The villain spread ptero wings, then scanned for clues with a bone scanner.
11. The villain wore a rex helmet, then lit up the cave with a lava flashlight.
12. The villain spread ptero wings, then lit up the cave with a lava flashlight.

TEACHER / PARENT

Answer Key

The Great Dino Fossil Mystery

Culprit: Ranger Rex

Ptero Wings · Lava Flashlight · Left-handed grip · Gold feathers · Crunchy Ferns

Trail: Start 21 → Clue 1 16 → Clue 2 12 → Clue 3 7 → Clue 4 4 → Clue 5 1

Clue 1 (Addition): "THE THIEF DID NOT USE AN AMBER COMPASS"

62 + 27 = 89 (T) · 37 + 55 = 92 (E) · 9 + 19 = 28 (N) · 24 + 43 = 67 (H) · 54 + 34 = 88 (M) · 24 + 22 = 46 (I) · 28 + 20 = 48 (D) · 36 + 29 = 65 (B) · 18 + 35 = 53 (R) · 21 + 49 = 70 (U) · 38 + 25 = 63 (F) · 58 + 38 = 96 (A) · 9 + 16 = 25 (P) · 31 + 16 = 47 (S) · 28 + 30 = 58 (C) · 39 + 25 = 64 (O)

Clue 2 (Subtraction): "THE FOSSIL PRINTS SHOW A LEFT HANDED GRIP"

99 - 30 = 69 (T) · 50 - 36 = 14 (N) · 117 - 39 = 78 (D) · 82 - 37 = 45 (L) · 75 - 3 = 72 (G) · 42 - 16 = 26 (F) · 42 - 24 = 18 (O) · 35 - 22 = 13 (W) · 57 - 23 = 34 (H) · 110 - 35 = 75 (P) · 24 - 12 = 12 (A) · 63 - 14 = 49 (R) · 83 - 27 = 56 (S) · 38 - 15 = 23 (I) · 46 - 5 = 41 (E)

Clue 3 (Multiplication facts (1-12)): "THE THIEF WAS TRAPPED BY CRUNCHY FERNS"

12 × 4 = 48 (T) · 12 × 3 = 36 (W) · 8 × 8 = 64 (E) · 5 × 5 = 25 (A) · 6 × 7 = 42 (P) · 7 × 7 = 49 (C) · 9 × 5 = 45 (B) · 4 × 5 = 20 (S) · 3 × 4 = 12 (H) · 10 × 8 = 80 (F) · 2 × 8 = 16 (I) · 10 × 7 = 70 (Y) · 9 × 11 = 99 (D) · 7 × 8 = 56 (U) · 12 × 12 = 144 (R) · 5 × 7 = 35 (N)

Clue 4 (Place value): "THE TRACKER FOUND A GOLD FEATHER AT THE SCENE"

What number has 6 tens and 1 one? = 61 (T) · What number has 7 tens and 8 ones? = 78 (R) · What number has 6 tens and 3 ones? = 63 (L) · What number has 8 tens and 3 ones? = 83 (H) · What number has 8 tens and 1 one? = 81 (U) · What number has 5 tens and 0 ones? = 50 (S) · What number has 4 tens and 9 ones? = 49 (D) · What number has 5 tens and 8 ones? = 58 (O) · What number has 2 tens and 9 ones? = 29 (K) · What number has 7 tens and 4 ones? = 74 (E) · What number has 6 tens and 7 ones? = 67 (G) · What number has 5 tens and 6 ones? = 56 (F) · What number has 7 tens and 6 ones? = 76 (N) · What number has 5 tens and 3 ones? = 53 (A) · What number has 2 tens and 3 ones? = 23 (C)

Clue 5 (Missing addends): surviving statement is box 12 → Ranger Rex

1 + ___ = 8 = 7 · 6 + ___ = 11 = 5 · 5 + ___ = 15 = 10 · 6 + ___ = 9 = 3 · 1 + ___ = 10 = 9 · 9 + ___ = 20 = 11 · 3 + ___ = 4 = 1 · 2 + ___ = 10 = 8 · 3 + ___ = 7 = 4 · 6 + ___ = 8 = 2 · 7 + ___ = 13 = 6