

The Golden Dino Egg Mystery

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

Detective: _____ Date: _____

Someone has swiped the Golden Triceratops Egg from the sanctuary hatchery! Chief Park Ranger Mary needs your math skills to track down the sneaky dino before the egg hatches.

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 Rogue Dino is _____

Possible suspects

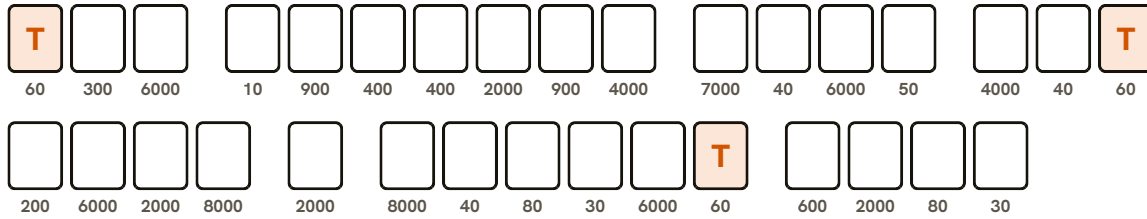
Cross off a row as each clue rules it out. The one left at the end is the culprit.

NAME	DINO ROAR	SUPER GEAR	SCRATCH STYLE	HEAD CREST	SCARE FACTOR
Cope	Earth shake	Steel armor	left claw scratch	bony dome	loud whistles
Steggy	Forest sprint	Sonar collar	left claw scratch	spiky frill	shiny mirrors
Sue Rex	Spike roll	Steel armor	right claw scratch	bony dome	cold water
Rocky Micro	Forest sprint	Lava boots	left claw scratch	bony dome	shiny mirrors
Anning	Spike roll	Steel armor	right claw scratch	feathery plume	shiny mirrors
Pip Raptor	Spike roll	Rocket pack	right claw scratch	bony dome	shiny mirrors
Gigi Giga	Forest sprint	Lava boots	left claw scratch	spiky frill	cold water
Trudy Tricera	Tail smash	Rocket pack	right claw scratch	bony dome	loud whistles
Rexy	Tail smash	Prism visor	right claw scratch	spiky frill	shiny mirrors
Buckland	Tail smash	Lava boots	right claw scratch	spiky frill	shiny mirrors
Spiny Pete	Tail smash	Sonar collar	right claw scratch	bony dome	shiny mirrors
Barnum	Earth shake	Rocket pack	right claw scratch	bony dome	cold water
Horner	Spike roll	Steel armor	right claw scratch	bony dome	shiny mirrors
Diplo Dan	Lava leap	Sonar collar	left claw scratch	spiky frill	shiny mirrors
Pippa Ptero	Spike roll	Steel armor	right claw scratch	feathery plume	loud whistles
Marsh	Earth shake	Rocket pack	left claw scratch	bony dome	shiny mirrors
Toby Troodon	Tail smash	Sonar collar	right claw scratch	bony dome	loud whistles
Albie Allosaurus	Spike roll	Sonar collar	right claw scratch	bony dome	shiny mirrors
Clover Cory	Spike roll	Sonar collar	right claw scratch	bony dome	cold water
Buster Bronto	Lava leap	Prism visor	right claw scratch	bony dome	shiny mirrors
Stan T-Rex	Spike roll	Steel armor	left claw scratch	feathery plume	shiny mirrors

CLUE 1 Place value

We look at the digital incubator readout. The display lights are scrambled, but understanding the value of the hundreds place will unlock the first clue.

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



What is the value of the 6 in 2,563? → **T**

What is the value of the 3 in 5,341? → **H**

What is the value of the 6 in 6,247? → **E**

What is the value of the 2 in 268? → **W**

What is the value of the 8 in 28,557? → **R**

What is the value of the 9 in 976? → **I**

What is the value of the 4 in 14,586? → **N**

What is the value of the 4 in 9,480? → **L**

What is the value of the 4 in 747? → **O**

What is the value of the 7 in 97,088? → **D**

What is the value of the 2 in 92,019? → **A**

What is the value of the 1 in 710? → **V**

What is the value of the 6 in 5,674? → **P**

What is the value of the 8 in 6,984? → **C**

What is the value of the 5 in 751? → **S**

What is the value of the 3 in 838? → **K**

Scratch space:

CLUE 2 Addition

We count the giant footprints leading away from the hatchery. Adding the tracks in the mud and the tracks in the sand gives us the exact count we need.

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

R												R							
5073	8069	6876	9018	7545	5830	5377	7747	4211	2876	5830	5073	7747	7545	5830	9018	7683	2876		
		R																	
4211	7683	5073	7683	4451	6758	5477	4576	3139	6758	4576	7545	9018	7683	4211	7747	5377	5377		

$1900 + 3173 = \square \rightarrow \text{R}$

$3051 + 2326 = \square \rightarrow \text{L}$

$3557 + 4512 = \square \rightarrow \text{I}$

$1704 + 2747 = \square \rightarrow \text{F}$

$1705 + 2871 = \square \rightarrow \text{N}$

$3321 + 2156 = \square \rightarrow \text{U}$

$3239 + 4306 = \square \rightarrow \text{T}$

$1267 + 1609 = \square \rightarrow \text{S}$

$6239 + 2779 = \square \rightarrow \text{H}$

$3391 + 3367 = \square \rightarrow \text{O}$

$3034 + 2796 = \square \rightarrow \text{C}$

$2418 + 1793 = \square \rightarrow \text{W}$

$1047 + 2092 = \square \rightarrow \text{D}$

$3235 + 4448 = \square \rightarrow \text{E}$

$3272 + 4475 = \square \rightarrow \text{A}$

$2597 + 4279 = \square \rightarrow \text{G}$

Scratch space:

CLUE 3

Subtraction

The thief broke some protective fences. Subtracting the broken fence posts from the total standing posts reveals the direction they fled.

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

T								T											
8570	6767	6637	4572	6637	5209	8817	8570	4442	5209	2163	5209	8552	5209	1888	3694	4442	6957	4354	
8817	6767	5904	2163	1888	4354	5904	4442	4442	6957	4442	8817								

$10892 - 2322 = \square \rightarrow \text{[T]}$

$8147 - 1190 = \square \rightarrow \text{[O]}$

$2719 - 556 = \square \rightarrow \text{[N]}$

$9336 - 4764 = \square \rightarrow \text{[B]}$

$11468 - 2651 = \square \rightarrow \text{[S]}$

$7894 - 3540 = \square \rightarrow \text{[M]}$

$4554 - 2666 = \square \rightarrow \text{[Y]}$

$8830 - 2926 = \square \rightarrow \text{[I]}$

$5631 - 422 = \square \rightarrow \text{[A]}$

$7398 - 761 = \square \rightarrow \text{[E]}$

$13548 - 4996 = \square \rightarrow \text{[W]}$

$7654 - 3960 = \square \rightarrow \text{[F]}$

$10352 - 3585 = \square \rightarrow \text{[H]}$

$5274 - 832 = \square \rightarrow \text{[R]}$

Scratch space:

CLUE 4

Multiplication facts (1-12)

We find rows of mysterious fossilized plants crushed along the path. Multiplying the number of rows by the plants in each row gives us our next lead.

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

A																	
96	110	144	11	32	50	144	70	60	36	72	60	50	36	144	70	60	
										A							
50	22	36	81	120	11	81	72	60	66	96	121	60					

$8 \times 12 = \square \rightarrow \text{A}$

$5 \times 10 = \square \rightarrow \text{D}$

$11 \times 11 = \square \rightarrow \text{V}$

$10 \times 11 = \square \rightarrow \text{B}$

$10 \times 7 = \square \rightarrow \text{M}$

$5 \times 12 = \square \rightarrow \text{E}$

$6 \times 12 = \square \rightarrow \text{H}$

$11 \times 1 = \square \rightarrow \text{N}$

$10 \times 12 = \square \rightarrow \text{I}$

$6 \times 11 = \square \rightarrow \text{C}$

$2 \times 11 = \square \rightarrow \text{U}$

$6 \times 6 = \square \rightarrow \text{S}$

$12 \times 12 = \square \rightarrow \text{O}$

$9 \times 9 = \square \rightarrow \text{T}$

$4 \times 8 = \square \rightarrow \text{Y}$

Scratch space:

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

The ranger needs to share the energy snacks equally among the search teams. Dividing the boxes of snacks tells us which trail to follow next.

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:

$48 \div 6 = \boxed{}$

$108 \div 9 = \boxed{}$

$55 \div 11 = \boxed{}$

$2 \div 2 = \boxed{}$

$110 \div 11 = \boxed{}$

$56 \div 8 = \boxed{}$

$44 \div 11 = \boxed{}$

$55 \div 5 = \boxed{}$

$33 \div 11 = \boxed{}$

$9 \div 1 = \boxed{}$

$14 \div 7 = \boxed{}$

Step 2 - cross out the sentence with each answer:

1. The villain rolls like a giant spike ball, then zooms off with a rocket pack.
2. The villain leaps over the hot bubbling lava, then stomps around in hot lava boots.
3. The villain sprints through the dense fern forest, then rattles heavy steel armor.
4. The villain leaps over the hot bubbling lava, then pings everyone with a sonar collar.
5. The villain leaps over the hot bubbling lava, then flashes a bright prism visor.
6. The villain smashes the ancient stone wall, then pings everyone with a sonar collar.
7. The villain smashes the ancient stone wall, then flashes a bright prism visor.
8. The villain rolls like a giant spike ball, then pings everyone with a sonar collar.
9. The villain sprints through the dense fern forest, then zooms off with a rocket pack.
10. The villain leaps over the hot bubbling lava, then rattles heavy steel armor.
11. The villain shakes the valley floor, then pings everyone with a sonar collar.
12. The villain rolls like a giant spike ball, then rattles heavy steel armor.

Answer Key

The Golden Dino Egg Mystery

Culprit: Spiny Pete

Tail smash · Sonar collar · right claw scratch · bony dome · shiny mirrors

Trail: Start 21 → Clue 1 17 → Clue 2 11 → Clue 3 7 → Clue 4 4 → Clue 5 1

Clue 1 (Place value): "THE VILLAIN DOES NOT WEAR A ROCKET PACK"

What is the value of the 6 in 2,563? = 60 (T) · What is the value of the 3 in 5,341? = 300 (H) · What is the value of the 6 in 6,247? = 6000 (E) · What is the value of the 2 in 268? = 200 (W) · What is the value of the 8 in 28,557? = 8000 (R) · What is the value of the 9 in 976? = 900 (I) · What is the value of the 4 in 14,586? = 4000 (N) · What is the value of the 4 in 9,480? = 400 (L) · What is the value of the 4 in 747? = 40 (O) · What is the value of the 7 in 97,088? = 7000 (D) · What is the value of the 2 in 92,019? = 2000 (A) · What is the value of the 1 in 710? = 10 (V) · What is the value of the 6 in 5,674? = 600 (P) · What is the value of the 8 in 6,984? = 80 (C) · What is the value of the 5 in 751? = 50 (S) · What is the value of the 3 in 838? = 30 (K)

Clue 2 (Addition): "RIGHT CLAW SCRATCHES WERE FOUND ON THE WALL"

1900 + 3173 = 5073 (R) · 3051 + 2326 = 5377 (L) · 3557 + 4512 = 8069 (I) · 1704 + 2747 = 4451 (F) · 1705 + 2871 = 4576 (N) · 3321 + 2156 = 5477 (U) · 3239 + 4306 = 7545 (T) · 1267 + 1609 = 2876 (S) · 6239 + 2779 = 9018 (H) · 3391 + 3367 = 6758 (O) · 3034 + 2796 = 5830 (C) · 2418 + 1793 = 4211 (W) · 1047 + 2092 = 3139 (D) · 3235 + 4448 = 7683 (E) · 3272 + 4475 = 7747 (A) · 2597 + 4279 = 6876 (G)

Clue 3 (Subtraction): "THE BEAST RAN AWAY FROM SHINY MIRRORS"

10892 - 2322 = 8570 (T) · 8147 - 1190 = 6957 (O) · 2719 - 556 = 2163 (N) · 9336 - 4764 = 4572 (B) · 11468 - 2651 = 8817 (S) · 7894 - 3540 = 4354 (M) · 4554 - 2666 = 1888 (Y) · 8830 - 2926 = 5904 (I) · 5631 - 422 = 5209 (A) · 7398 - 761 = 6637 (E) · 13548 - 4996 = 8552 (W) · 7654 - 3960 = 3694 (F) · 10352 - 3585 = 6767 (H) · 5274 - 832 = 4442 (R)

Clue 4 (Multiplication facts (1-12)): "A BONY DOME SHED SOME DUST IN THE CAVE"

8 × 12 = 96 (A) · 5 × 10 = 50 (D) · 11 × 11 = 121 (V) · 10 × 11 = 110 (B) · 10 × 7 = 70 (M) · 5 × 12 = 60 (E) · 6 × 12 = 72 (H) · 11 × 1 = 11 (N) · 10 × 12 = 120 (I) · 6 × 11 = 66 (C) · 2 × 11 = 22 (U) · 6 × 6 = 36 (S) · 12 × 12 = 144 (O) · 9 × 9 = 81 (T) · 4 × 8 = 32 (Y)

Clue 5 (Division facts (1-12)): surviving statement is box 6 → Spiny Pete

48 ÷ 6 = 8 · 108 ÷ 9 = 12 · 55 ÷ 11 = 5 · 2 ÷ 2 = 1 · 110 ÷ 11 = 10 · 56 ÷ 8 = 7 · 44 ÷ 11 = 4 · 55 ÷ 5 = 11 · 33 ÷ 11 = 3 · 9 ÷ 1 = 9 · 14 ÷ 7 = 2