The Great Fossil Park Mystery

Grade 6 math · Addition, Multiplication, Subtraction, Rounding, Division · Reading level grades 5-6

Detective: _____ **Date:** _____

A rare glowing amber fossil vanished from the central display crate right before the grand opening of Cretaceous Canopy Reserve! The suspect left behind tracks, broken vines, and strange evidence across the dig site. Help Detective Rex analyze the field notes to catch the culprit before the park gates open!

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 dino bandit is _____

Possible suspects

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

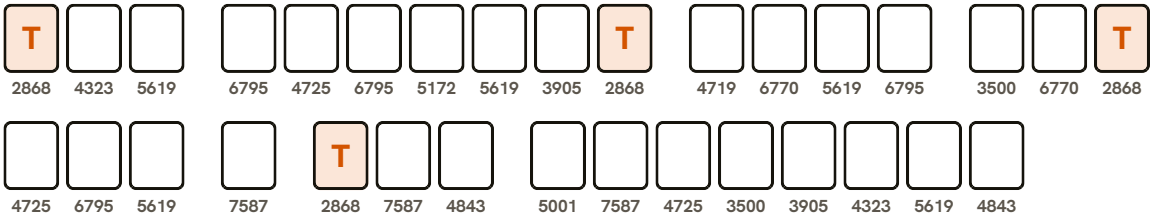
NAME	DINO EXO SUIT	GADGET TOOL	STRIDE STYLE	CREST COLOR	DISTRACTION ITEM
Ranger Robert Bakker	TRex Exo Suit	Sonic Whistle	Left Footed Stride	Crimson Crest	Loud Airhorn
Ranger Angela Milner	Pterodactyl Glider	Flare Gun	Right Footed Stride	Amber Crest	Sizzling Steak
Ranger Roy Chapman	Raptor Speed Armor	Flare Gun	Right Footed Stride	Emerald Crest	Sizzling Steak
Dr Xu Xing	TRex Exo Suit	Flare Gun	Left Footed Stride	Crimson Crest	Bright Flashlight
Dr Karen Chin	Stego Bone Shield	Flare Gun	Right Footed Stride	Amber Crest	Sizzling Steak
Dr Paul Sereno	Raptor Speed Armor	Thermal Scanner	Right Footed Stride	Emerald Crest	Loud Airhorn
Ranger Kenneth Carpenter	TRex Exo Suit	Grappling Vine	Left Footed Stride	Amber Crest	Loud Airhorn
Dr Lindsay Zanno	TRex Exo Suit	Thermal Scanner	Left Footed Stride	Amber Crest	Bright Flashlight
Ranger Jack Horner	Trike Horn Helmet	Grappling Vine	Right Footed Stride	Crimson Crest	Sizzling Steak
Ranger Phil Currie	Stego Bone Shield	Flare Gun	Right Footed Stride	Crimson Crest	Loud Airhorn
Dr Patricia Vickers	TRex Exo Suit	Grappling Vine	Left Footed Stride	Crimson Crest	Loud Airhorn
Prof Richard Owen	Pterodactyl Glider	Thermal Scanner	Right Footed Stride	Amber Crest	Bright Flashlight
Ranger Luis Chiappe	Stego Bone Shield	Thermal Scanner	Right Footed Stride	Emerald Crest	Sizzling Steak
Dr Rodolfo Coria	TRex Exo Suit	Thermal Scanner	Right Footed Stride	Emerald Crest	Bright Flashlight
Dr Ellie Sattler	TRex Exo Suit	Sonic Whistle	Right Footed Stride	Amber Crest	Sizzling Steak
Ranger Jim Kirkland	Stego Bone Shield	Grappling Vine	Right Footed Stride	Amber Crest	Sizzling Steak
Ranger Susan Hendrickson	Pterodactyl Glider	Grappling Vine	Right Footed Stride	Amber Crest	Loud Airhorn
Dr Barnum Brown	TRex Exo Suit	Thermal Scanner	Left Footed Stride	Amber Crest	Sizzling Steak
Dr Philip Senter	Stego Bone Shield	Grappling Vine	Right Footed Stride	Crimson Crest	Loud Airhorn
Dr Lawrence Lambe	Pterodactyl Glider	Grappling Vine	Right Footed Stride	Crimson Crest	Loud Airhorn
Ranger Dong Zhiming	Raptor Speed Armor	Tar Launcher	Right Footed Stride	Amber Crest	Sizzling Steak

make your own at mathcrackers.com

CLUE 1 Addition

To calculate total footprint depth, Ranger Mary added up the measurements from all three mud tracks.

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



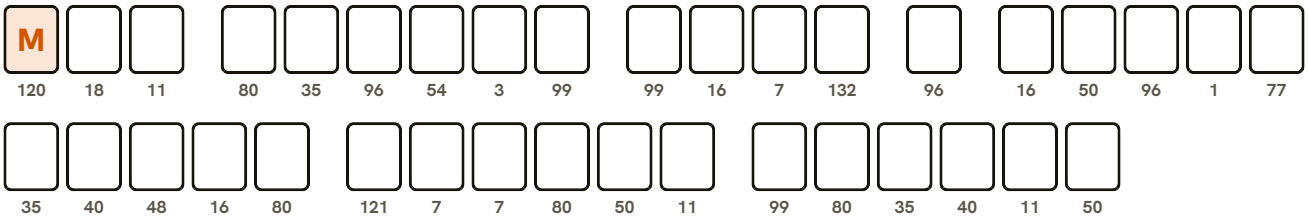
1814 + 1054 = ☐ → T	2283 + 1622 = ☐ → C	2262 + 2061 = ☐ → H
4341 + 2454 = ☐ → S	4130 + 2640 = ☐ → O	1996 + 2847 = ☐ → R
1924 + 2795 = ☐ → D	2504 + 3115 = ☐ → E	2416 + 1084 = ☐ → N
3118 + 2054 = ☐ → P	3192 + 1533 = ☐ → U	1677 + 3324 = ☐ → L
4633 + 2954 = ☐ → A		

Scratch space:

CLUE 2 Multiplication facts (1-12)

> Analyzing the claw scratches along the fence required multiplying the number of posts by the scratch count per post.

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



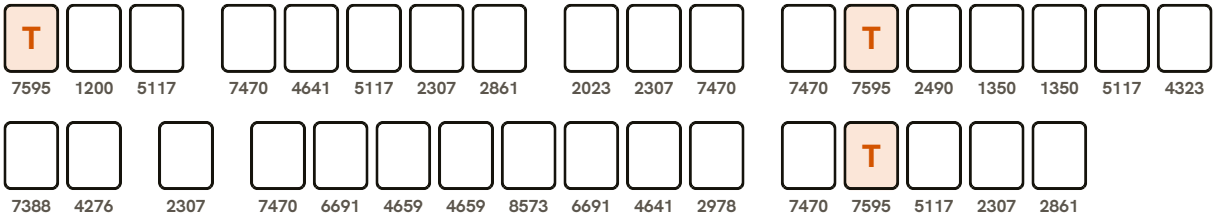
10 × 12 = ☐ → M	1 × 11 = ☐ → D	7 × 11 = ☐ → Y		
3 × 6 = ☐ → U	12 × 8 = ☐ → A	5 × 7 = ☐ → R	8 × 5 = ☐ → I	
11 × 9 = ☐ → S	9 × 6 = ☐ → C	8 × 10 = ☐ → T		
12 × 11 = ☐ → W	3 × 1 = ☐ → K	1 × 1 = ☐ → V		
11 × 11 = ☐ → F	10 × 5 = ☐ → E	4 × 12 = ☐ → G		
4 × 4 = ☐ → H	1 × 7 = ☐ → O			

Scratch space:

CLUE 3 Subtraction

To find out how many supply crates were taken, Dr Ellie subtracted the remaining boxes from the starting total.

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



8523 - 928 = ☐ → T

6682 - 3821 = ☐ → K

7631 - 3355 = ☐ → Y

7811 - 2694 = ☐ → E

3548 - 1241 = ☐ → A

2540 - 50 = ☐ → O

4409 - 3059 = ☐ → P

5499 - 4299 = ☐ → H

2180 - 157 = ☐ → W

3232 - 254 = ☐ → G

12300 - 4830 = ☐ → S

8019 - 631 = ☐ → B

8343 - 3702 = ☐ → N

4794 - 471 = ☐ → D

13016 - 4443 = ☐ → L

9935 - 3244 = ☐ → I

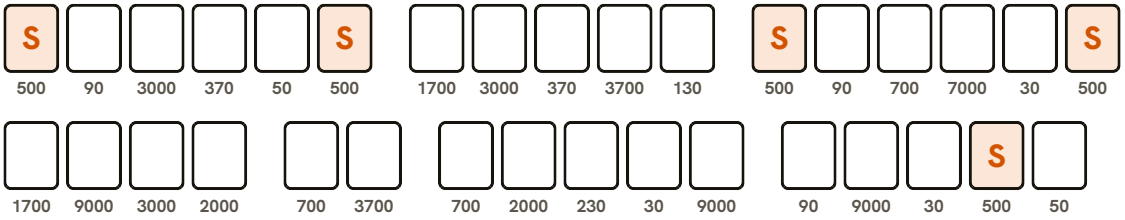
7383 - 2724 = ☐ → Z

Scratch space:

CLUE 4 Rounding

> The digital motion sensor radar only reports distances rounded to the nearest ten meters.

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



Round 478 to the nearest hundred ☐ → **S**

Round 1,731 to the nearest hundred ☐ → **F**

Round 9,387 to the nearest thousand ☐ → **R**

Round 374 to the nearest ten ☐ → **U**

Round 3,404 to the nearest thousand ☐ → **O**

Round 129 to the nearest ten ☐ → **D**

Round 704 to the nearest hundred ☐ → **A**

Round 7,364 to the nearest thousand ☐ → **L**

Round 231 to the nearest ten ☐ → **B**

Round 87 to the nearest ten ☐ → **C**

Round 48 to the nearest ten ☐ → **T**

Round 1,996 to the nearest thousand ☐ → **M**

Round 33 to the nearest ten ☐ → **E**

Round 3,714 to the nearest hundred ☐ → **N**

Scratch space:

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

To divide the search grid evenly among the rescue teams, the head ranger split the map into equal sectors.

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:

60 ÷ 10 = ☐	11 ÷ 11 = ☐	90 ÷ 9 = ☐	72 ÷ 8 = ☐	16 ÷ 8 = ☐
72 ÷ 9 = ☐	144 ÷ 12 = ☐	21 ÷ 3 = ☐	10 ÷ 2 = ☐	22 ÷ 2 = ☐
36 ÷ 12 = ☐				

Step 2 - cross out the sentence with each answer:

1. The villain shielded against the rockslide, then swung from a grappling vine.
2. The villain stomped through the mud pit, then scanned with thermal sights.
3. The villain soared over the canyon fence, then blasted a sticky tar launcher.
4. The villain shielded against the rockslide, then fired a bright flare gun.
5. The villain charged through the timber gate, then swung from a grappling vine.
6. The villain stomped through the mud pit, then blew a loud sonic whistle.
7. The villain soared over the canyon fence, then scanned with thermal sights.
8. The villain dashed past the raptor pen, then swung from a grappling vine.
9. The villain soared over the canyon fence, then swung from a grappling vine.
10. The villain soared over the canyon fence, then fired a bright flare gun.
11. The villain stomped through the mud pit, then swung from a grappling vine.
12. The villain charged through the timber gate, then blasted a sticky tar launcher.

TEACHER / PARENT

Answer Key

The Great Fossil Park Mystery

Culprit: Dr Karen Chin

Stego Bone Shield · Flare Gun · Right Footed Stride · Amber Crest · Sizzling Steak

Trail: Start 21 → Clue 1 20 → Clue 2 14 → Clue 3 7 → Clue 4 4 → Clue 5 1

Clue 1 (Addition): "THE SUSPECT DOES NOT USE A TAR LAUNCHER"

1814 + 1054 = 2868 (T) · 2283 + 1622 = 3905 (C) · 2262 + 2061 = 4323 (H) · 4341 + 2454 = 6795 (S) · 4130 + 2640 = 6770 (O) · 1996 + 2847 = 4843 (R) · 1924 + 2795 = 4719 (D) · 2504 + 3115 = 5619 (E) · 2416 + 1084 = 3500 (N) · 3118 + 2054 = 5172 (P) · 3192 + 1533 = 4725 (U) · 1677 + 3324 = 5001 (L) · 4633 + 2954 = 7587 (A)

Clue 2 (Multiplication facts (1-12)): "MUD TRACKS SHOW A HEAVY RIGHT FOOTED STRIDE"

10 × 12 = 120 (M) · 1 × 11 = 11 (D) · 7 × 11 = 77 (Y) · 3 × 6 = 18 (U) · 12 × 8 = 96 (A) · 5 × 7 = 35 (R) · 8 × 5 = 40 (I) · 11 × 9 = 99 (S) · 9 × 6 = 54 (C) · 8 × 10 = 80 (T) · 12 × 11 = 132 (W) · 3 × 1 = 3 (K) · 1 × 1 = 1 (V) · 11 × 11 = 121 (F) · 10 × 5 = 50 (E) · 4 × 12 = 48 (G) · 4 × 4 = 16 (H) · 1 × 7 = 7 (O)

Clue 3 (Subtraction): "THE SNEAK WAS STOPPED BY A SIZZLING STEAK"

8523 - 928 = 7595 (T) · 6682 - 3821 = 2861 (K) · 7631 - 3355 = 4276 (Y) · 7811 - 2694 = 5117 (E) · 3548 - 1241 = 2307 (A) · 2540 - 50 = 2490 (O) · 4409 - 3059 = 1350 (P) · 5499 - 4299 = 1200 (H) · 2180 - 157 = 2023 (W) · 3232 - 254 = 2978 (G) · 12300 - 4830 = 7470 (S) · 8019 - 631 = 7388 (B) · 8343 - 3702 = 4641 (N) · 4794 - 471 = 4323 (D) · 13016 - 4443 = 8573 (L) · 9935 - 3244 = 6691 (I) · 7383 - 2724 = 4659 (Z)

Clue 4 (Rounding): "SCOUTS FOUND SCALES FROM AN AMBER CREST"

Round 478 to the nearest hundred = 500 (S) · Round 1,731 to the nearest hundred = 1700 (F) · Round 9,387 to the nearest thousand = 9000 (R) · Round 374 to the nearest ten = 370 (U) · Round 3,404 to the nearest thousand = 3000 (O) · Round 129 to the nearest ten = 130 (D) · Round 704 to the nearest hundred = 700 (A) · Round 7,364 to the nearest thousand = 7000 (L) · Round 231 to the nearest ten = 230 (B) · Round 87 to the nearest ten = 90 (C) · Round 48 to the nearest ten = 50 (T) · Round 1,996 to the nearest thousand = 2000 (M) · Round 33 to the nearest ten = 30 (E) · Round 3,714 to the nearest hundred = 3700 (N)

Clue 5 (Division facts (1-12)): surviving statement is box 4 → Dr Karen Chin

60 ÷ 10 = 6 · 11 ÷ 11 = 1 · 90 ÷ 9 = 10 · 72 ÷ 8 = 9 · 16 ÷ 8 = 2 · 72 ÷ 9 = 8 · 144 ÷ 12 = 12 · 21 ÷ 3 = 7 · 10 ÷ 2 = 5 · 22 ÷ 2 = 11 · 36 ÷ 12 = 3