



The Great Trash Can Mystery

Grade 4 math · Multiplication, Subtraction, Multi-step word problems, Word problems, Missing addends · Reading level grades 3-4

Detective: _____ Date: _____

Someone raided the campground supply shed and stole all the golden acorn trophies! Detective Jimothy the Raccoon is on the case to track down the sneaky 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 Shiny Thief is _____

Possible suspects

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

NAME	DISTRACTION GADGET	ESCAPE VEHICLE	GRIP STYLE	TAIL PATTERN	SCENT WEAKNESS
Milo Mole	Flashlight Cannon	Pogo Stick	Right Pawed	Ringed Tail	Smelly Cheese
Victor Vole	Stink Bomb Launcher	Trash Can Go Kart	Right Pawed	Ringed Tail	Peanut Butter
Jimothy Raccoon	Stink Bomb Launcher	Pogo Stick	Left Pawed	Spotted Tail	Fresh Mint
Rory Rabbit	Laser Pointer	Getaway Unicycle	Right Pawed	Striped Tail	Smelly Cheese
Fiona Skunk	Glitter Blaster	Getaway Unicycle	Left Pawed	Ringed Tail	Peanut Butter
Gideon Gopher	Glitter Blaster	Cardboard Glider	Left Pawed	Ringed Tail	Smelly Cheese
Tess Timberwolf	Glitter Blaster	Pogo Stick	Right Pawed	Spotted Tail	Fresh Mint
Quincy Quail	Noise Maker	Trash Can Go Kart	Left Pawed	Ringed Tail	Fresh Mint
Barnaby Bear	Flashlight Cannon	Cardboard Glider	Right Pawed	Ringed Tail	Peanut Butter
Willa Woodchuck	Glitter Blaster	Turbo Skateboard	Right Pawed	Striped Tail	Fresh Mint
Roscoe Raccoon	Stink Bomb Launcher	Getaway Unicycle	Right Pawed	Ringed Tail	Fresh Mint
Penny Porcupine	Noise Maker	Pogo Stick	Left Pawed	Spotted Tail	Smelly Cheese
Jasper Otter	Flashlight Cannon	Pogo Stick	Right Pawed	Ringed Tail	Peanut Butter
Uma Weasel	Noise Maker	Turbo Skateboard	Left Pawed	Ringed Tail	Peanut Butter
Nora Nutria	Stink Bomb Launcher	Pogo Stick	Left Pawed	Ringed Tail	Fresh Mint
Sammy Squirrel	Stink Bomb Launcher	Trash Can Go Kart	Left Pawed	Spotted Tail	Peanut Butter
Piper Possum	Glitter Blaster	Getaway Unicycle	Right Pawed	Spotted Tail	Peanut Butter
Hattie Hare	Noise Maker	Trash Can Go Kart	Left Pawed	Striped Tail	Peanut Butter
Daisy Deer	Laser Pointer	Getaway Unicycle	Right Pawed	Ringed Tail	Peanut Butter
Ziggy Beaver	Noise Maker	Getaway Unicycle	Right Pawed	Spotted Tail	Peanut Butter
Sly Fox	Flashlight Cannon	Getaway Unicycle	Right Pawed	Ringed Tail	Peanut Butter

CLUE 1
Multiplication facts (1-12)

Jimothy counts rows of overturned trash cans in the camp kitchen to find a hidden clue.

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

T			T										T				
84	100	9	84	100	90	9	108	10	90	10	44	96	84	144	110	9	64

T													T
84	80	64	110	100	14	64	44	27	96	54	64	80	84

$12 \times 7 = \square \rightarrow \text{**T**}$

$3 \times 3 = \square \rightarrow \text{**E**}$

$9 \times 6 = \square \rightarrow \text{**K**}$

$12 \times 9 = \square \rightarrow \text{**F**}$

$8 \times 12 = \square \rightarrow \text{**O**}$

$3 \times 9 = \square \rightarrow \text{**G**}$

$4 \times 11 = \square \rightarrow \text{**N**}$

$7 \times 2 = \square \rightarrow \text{**C**}$

$10 \times 11 = \square \rightarrow \text{**S**}$

$9 \times 10 = \square \rightarrow \text{**I**}$

$12 \times 12 = \square \rightarrow \text{**U**}$

$10 \times 10 = \square \rightarrow \text{**H**}$

$10 \times 8 = \square \rightarrow \text{**R**}$

$10 \times 1 = \square \rightarrow \text{**D**}$

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

Scratch space:

CLUE 2

Subtraction

Jimothy compares the missing lantern batteries before and after the heist.

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

T 7210	6347	5192	4167	3765	4167	5622	5192	4421	T 7210	8498	5192	1776	T 7210	4481	7480	6500	6347	T 7210
5622	5962	1817	5622	4481	7480	8757	T 7210	4167	6923	8757	T 7210	6347	5192	8498	5962	T 7210	4421	6347

$10503 - 3293 = \square \rightarrow \boxed{\text{T}}$

$9863 - 4671 = \square \rightarrow \boxed{\text{E}}$

$9529 - 3907 = \square \rightarrow \boxed{\text{P}}$

$8534 - 4053 = \square \rightarrow \boxed{\text{R}}$

$5558 - 1793 = \square \rightarrow \boxed{\text{U}}$

$8870 - 2370 = \square \rightarrow \boxed{\text{G}}$

$4341 - 174 = \square \rightarrow \boxed{\text{S}}$

$6271 - 4454 = \square \rightarrow \boxed{\text{W}}$

$5064 - 643 = \square \rightarrow \boxed{\text{C}}$

$13613 - 4856 = \square \rightarrow \boxed{\text{N}}$

$6196 - 234 = \square \rightarrow \boxed{\text{A}}$

$2480 - 704 = \square \rightarrow \boxed{\text{F}}$

$6605 - 258 = \square \rightarrow \boxed{\text{H}}$

$11002 - 4079 = \square \rightarrow \boxed{\text{O}}$

$11271 - 3791 = \square \rightarrow \boxed{\text{I}}$

$11541 - 3043 = \square \rightarrow \boxed{\text{L}}$

Scratch space:

CLUE 3

Multi-step word problems

Jimothy tracks stolen snack bags across three campsites to deduce where the thief stopped.

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

Someone scared the villain off with

P											R
31	52	11	40	77	15	6	77	15	15	52	

Jimothy collected 39 marshmallows in the morning and 23 marshmallows in the afternoon, then split them equally among 2 Raccoon Rangers. How many marshmallows did each get?

Answer: → **P**

Jimothy collected 16 juice boxes in the morning and 28 juice boxes in the afternoon, then split them equally among 4 Raccoon Rangers. How many juice boxes did each get?

Answer: → **A**

There were 311 camp whistles in all. 3 camp whistles were set aside. The rest were shared equally among 4 Raccoon Rangers. How many camp whistles did each get?

Answer: → **U**

Jimothy earned 2 marshmallows in each of 2 rounds, plus 17 bonus marshmallows. Then 15 marshmallows were lost. How many marshmallows are left?

Answer: → **B**

There were 109 juice boxes in all. 1 Raccoon Rangers used 34 juice boxes each. The other 5 Raccoon Rangers shared the rest equally. How many juice boxes did each of the other Raccoon Rangers get?

Answer: → **T**

Jimothy filled 3 boxes with 9 juice boxes each, then found 13 more juice boxes. How many juice boxes are there in all?

Answer: → **N**

Jimothy collected 27 marshmallows in the morning and 285 marshmallows in the afternoon, then split them equally among 6 Raccoon Rangers. How many marshmallows did each get?

Answer: → **E**

Scratch space:

CLUE 4

Word problems

Jimothy figures out how many footprints lead toward the pine forest.

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

A strand of

R							A		L
44	30	50	63	77	14	65		30	

 hair turned up at the scene.

There were 60 juice boxes. 16 were used up. How many juice boxes are left?

Answer: →

R

Jimothy lined up 2 rows of 7 camp whistles. How many camp whistles in all?

Answer: →

D

Jimothy lined up 10 rows of 5 acorns. How many acorns in all?

Answer: →

N

Jimothy found 19 marshmallows yesterday and 46 more today. How many marshmallows in all?

Answer: →

T

Jimothy found 51 camp whistles yesterday and 12 more today. How many camp whistles in all?

Answer: →

G

Jimothy lined up 3 rows of 10 juice boxes. How many juice boxes in all?

Answer: →

I

Jimothy lined up 11 rows of 7 juice boxes. How many juice boxes in all?

Answer: →

E

Scratch space:

CLUE 5**Missing addends - the last clue**

Jimothy calculates how many shiny bottle caps are needed to complete the map.

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:

$35 + \underline{\quad} = 43$

$35 + \underline{\quad} = 42$

$39 + \underline{\quad} = 49$

$37 + \underline{\quad} = 41$

$26 + \underline{\quad} = 28$

$9 + \underline{\quad} = 18$

$39 + \underline{\quad} = 40$

$16 + \underline{\quad} = 21$

$18 + \underline{\quad} = 29$

$38 + \underline{\quad} = 41$

$4 + \underline{\quad} = 16$

Step 2 - cross out the sentence with each answer:

1. The villain fired a glitter blaster, then escaped in a trash can go kart.
2. The villain shined a bright laser pointer, then sped off on a turbo skateboard.
3. The villain distracted guards with a flashlight cannon, then sped off on a turbo skateboard.
4. The villain dropped a stink bomb launcher, then sped off on a turbo skateboard.
5. The villain distracted guards with a flashlight cannon, then escaped in a trash can go kart.
6. The villain shined a bright laser pointer, then zoomed away on a getaway unicycle.
7. The villain distracted guards with a flashlight cannon, then soared off in a cardboard glider.
8. The villain distracted guards with a flashlight cannon, then zoomed away on a getaway unicycle.
9. The villain set off a loud noise maker, then zoomed away on a getaway unicycle.
10. The villain distracted guards with a flashlight cannon, then bounced away on a pogo stick.
11. The villain set off a loud noise maker, then bounced away on a pogo stick.
12. The villain fired a glitter blaster, then zoomed away on a getaway unicycle.

Answer Key

The Great Trash Can Mystery

Culprit: Daisy Deer

Laser Pointer · Getaway Unicycle · Right Pawed · Ringed Tail · Peanut Butter

Trail: Start 21 → Clue 1 17 → Clue 2 11 → Clue 3 6 → Clue 4 4 → Clue 5 1

Clue 1 (Multiplication facts (1-12)): "THE THIEF DID NOT USE A TRASH CAN GO KART"

$12 \times 7 = 84$ (T) · $3 \times 3 = 9$ (E) · $9 \times 6 = 54$ (K) · $12 \times 9 = 108$ (F) · $8 \times 12 = 96$ (O) · $3 \times 9 = 27$ (G) · $4 \times 11 = 44$ (N) · $7 \times 2 = 14$ (C) · $10 \times 11 = 110$ (S) · $9 \times 10 = 90$ (I) · $12 \times 12 = 144$ (U) · $10 \times 10 = 100$ (H) · $10 \times 8 = 80$ (R) · $10 \times 1 = 10$ (D) · $8 \times 8 = 64$ (A)

Clue 2 (Subtraction): "THE SUSPECT LEFT RIGHT PAW PRINTS ON THE LATCH"

$10503 - 3293 = 7210$ (T) · $9863 - 4671 = 5192$ (E) · $9529 - 3907 = 5622$ (P) · $8534 - 4053 = 4481$ (R) · $5558 - 1793 = 3765$ (U) · $8870 - 2370 = 6500$ (G) · $4341 - 174 = 4167$ (S) · $6271 - 4454 = 1817$ (W) · $5064 - 643 = 4421$ (C) · $13613 - 4856 = 8757$ (N) · $6196 - 234 = 5962$ (A) · $2480 - 704 = 1776$ (F) · $6605 - 258 = 6347$ (H) · $11002 - 4079 = 6923$ (O) · $11271 - 3791 = 7480$ (I) · $11541 - 3043 = 8498$ (L)

Clue 3 (Multi-step word problems): "PEANUT BUTTER"

Jimothy collected 39 marshmallows in the morning and 23 marshmallows in the afternoon, then split them equally among 2 Raccoon Rangers. How many marshmallows did each get? = 31 (P) · Jimothy collected 16 juice boxes in the morning and 28 juice boxes in the afternoon, then split them equally among 4 Raccoon Rangers. How many juice boxes did each get? = 11 (A) · There were 311 camp whistles in all. 3 camp whistles were set aside. The rest were shared equally among 4 Raccoon Rangers. How many camp whistles did each get? = 77 (U) · Jimothy earned 2 marshmallows in each of 2 rounds, plus 17 bonus marshmallows. Then 15 marshmallows were lost. How many marshmallows are left? = 6 (B) · There were 109 juice boxes in all. 1 Raccoon Rangers used 34 juice boxes each. The other 5 Raccoon Rangers shared the rest equally. How many juice boxes did each of the other Raccoon Rangers get? = 15 (T) · Jimothy filled 3 boxes with 9 juice boxes each, then found 13 more juice boxes. How many juice boxes are there in all? = 40 (N) · Jimothy collected 27 marshmallows in the morning and 285 marshmallows in the afternoon, then split them equally among 6 Raccoon Rangers. How many marshmallows did each get? = 52 (E)

Clue 4 (Word problems): "RINGED TAIL"

There were 60 juice boxes. 16 were used up. How many juice boxes are left? = 44 (R) · Jimothy lined up 2 rows of 7 camp whistles. How many camp whistles in all? = 14 (D) · Jimothy lined up 10 rows of 5 acorns. How many acorns in all? = 50 (N) · Jimothy found 19 marshmallows yesterday and 46 more today. How many marshmallows in all? = 65 (T) · Jimothy found 51 camp whistles yesterday and 12 more today. How many camp whistles in all? = 63 (G) · Jimothy lined up 3 rows of 10 juice boxes. How many juice boxes in all? = 30 (I) · Jimothy lined up 11 rows of 7 juice boxes. How many juice boxes in all? = 77 (E)

Clue 5 (Missing addends): surviving statement is box 6 → Daisy Deer

$35 + \underline{\quad} = 43 = 8$ · $35 + \underline{\quad} = 42 = 7$ · $39 + \underline{\quad} = 49 = 10$ · $37 + \underline{\quad} = 41 = 4$ · $26 + \underline{\quad} = 28 = 2$ · $9 + \underline{\quad} = 18 = 9$ · $39 + \underline{\quad} = 40 = 1$ · $16 + \underline{\quad} = 21 = 5$ · $18 + \underline{\quad} = 29 = 11$ · $38 + \underline{\quad} = 41 = 3$ · $4 + \underline{\quad} = 16 = 12$