



The Great Shoe Charm Caper

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

Detective: _____ **Date:** _____

Someone took the Golden Shoe Charm from the Shoe Factory! We must look at the colorful foam prints to find 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 The Jibbitz Bandit is _____

Possible suspects

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

NAME	FAVORITE SHOE STYLE	POCKET CHARM	STEPPING FOOT	SHED HAIR COLOR	LURED BY
Molly	Sporty Sandal	Slice Pizza Charm	Right Foot Lead	Cool Blue Thread	Warm Sunshine
Chippy	Sporty Sandal	Glow Star Charm	Left Foot Lead	Neon Pink Wool	Bubbly Soap
Ziggy	Classic Clog	Glow Star Charm	Right Foot Lead	Neon Pink Wool	Sparkle Glitter
Bobby	Swift Slide	Shiny Robot Charm	Right Foot Lead	Cool Blue Thread	Bubbly Soap
Billy	Classic Clog	Shiny Robot Charm	Left Foot Lead	Neon Pink Wool	Bubbly Soap
Ronny	Classic Clog	Cute Kitten Charm	Right Foot Lead	Cool Blue Thread	Warm Sunshine
Benny	Mega Platform	Glow Star Charm	Left Foot Lead	Neon Pink Wool	Sparkle Glitter
Gidget	Mega Platform	Cute Kitten Charm	Right Foot Lead	Bright Green Yarn	Bubbly Soap
Danny	Sporty Sandal	Cute Kitten Charm	Left Foot Lead	Cool Blue Thread	Bubbly Soap
Nelly	Classic Clog	Cute Kitten Charm	Left Foot Lead	Bright Green Yarn	Bubbly Soap
Holly	All Terrain Boot	Laser Dino Charm	Left Foot Lead	Cool Blue Thread	Bubbly Soap
Penny	Swift Slide	Glow Star Charm	Right Foot Lead	Cool Blue Thread	Warm Sunshine
Willy	All Terrain Boot	Glow Star Charm	Right Foot Lead	Neon Pink Wool	Bubbly Soap
Dot	Classic Clog	Cute Kitten Charm	Right Foot Lead	Cool Blue Thread	Bubbly Soap
Sally	Swift Slide	Shiny Robot Charm	Left Foot Lead	Cool Blue Thread	Warm Sunshine
Polly	Swift Slide	Glow Star Charm	Right Foot Lead	Cool Blue Thread	Bubbly Soap
Sunny	Swift Slide	Shiny Robot Charm	Left Foot Lead	Neon Pink Wool	Bubbly Soap
Jenny	All Terrain Boot	Laser Dino Charm	Right Foot Lead	Cool Blue Thread	Bubbly Soap
Pip	Swift Slide	Shiny Robot Charm	Left Foot Lead	Neon Pink Wool	Warm Sunshine
Lily	Mega Platform	Glow Star Charm	Right Foot Lead	Cool Blue Thread	Bubbly Soap
Spike	Classic Clog	Cute Kitten Charm	Left Foot Lead	Neon Pink Wool	Bubbly Soap

CLUE 1

Addition

The shoe factory keeper adds up the pile of lost croc straps to see what is missing.

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

T			T														T
85	60	91	85	60	24	91	43	60	96	42	56	87	77	87	33	87	85

25	60	96	77	27

$25 + 60 = \square \rightarrow \boxed{\text{T}}$

$28 + 28 = \square \rightarrow \boxed{\text{N}}$

$35 + 52 = \square \rightarrow \boxed{\text{O}}$

$15 + 10 = \square \rightarrow \boxed{\text{C}}$

$23 + 37 = \square \rightarrow \boxed{\text{H}}$

$23 + 19 = \square \rightarrow \boxed{\text{S}}$

$14 + 10 = \square \rightarrow \boxed{\text{I}}$

$19 + 8 = \square \rightarrow \boxed{\text{M}}$

$26 + 51 = \square \rightarrow \boxed{\text{R}}$

$34 + 62 = \square \rightarrow \boxed{\text{A}}$

$10 + 23 = \square \rightarrow \boxed{\text{B}}$

$27 + 16 = \square \rightarrow \boxed{\text{F}}$

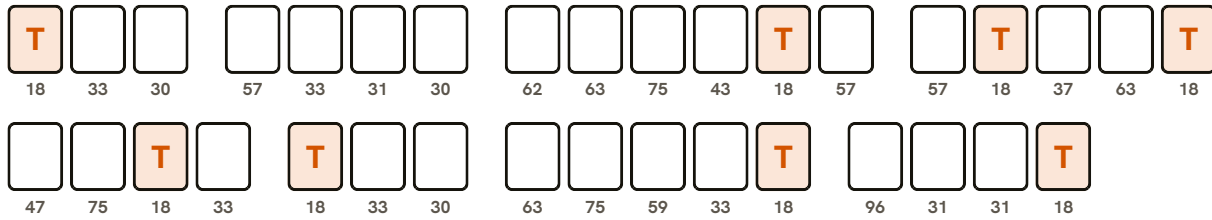
$38 + 53 = \square \rightarrow \boxed{\text{E}}$

Scratch space:

CLUE 2 Place value

We look at the charm cabinet where tens and ones of tiny shoe plugs are sorted.

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



What number has 1 ten and 8 ones?

→ **T**

What number has 7 tens and 5 ones?

→ **I**

What number has 3 tens and 7 ones?

→ **A**

What number has 4 tens and 3 ones?

→ **N**

What number has 3 tens and 3 ones?

→ **H**

What number has 4 tens and 7 ones?

→ **W**

What number has 5 tens and 9 ones?

→ **G**

What number has 9 tens and 6 ones?

→ **F**

What number has 5 tens and 7 ones?

→ **S**

What number has 3 tens and 0 ones?

→ **E**

What number has 6 tens and 3 ones?

→ **R**

What number has 6 tens and 2 ones?

→ **P**

What number has 3 tens and 1 one?

→ **O**

Scratch space:

CLUE 3

Multiplication facts (1-12)

The designer spots neat rows of new stars with five charms in each group.

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

T			T															
8	7	9	8	7	88	9	66	63	50	100	9	42	80	15	80	80	63	81

42	50	64	55

$2 \times 4 = \square \rightarrow \text{T}$

$9 \times 7 = \square \rightarrow \text{L}$

$8 \times 11 = \square \rightarrow \text{I}$

$5 \times 3 = \square \rightarrow \text{U}$

$1 \times 7 = \square \rightarrow \text{H}$

$1 \times 9 = \square \rightarrow \text{E}$

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

$8 \times 10 = \square \rightarrow \text{B}$

$11 \times 5 = \square \rightarrow \text{P}$

$10 \times 10 = \square \rightarrow \text{V}$

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

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

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

$6 \times 7 = \square \rightarrow \text{S}$

Scratch space:

CLUE 4

Subtraction

We count all the charms in the bucket and subtract the ones that fell on the floor.

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

W														
64	29	76	22	49	13	35	74	22	22	31	40	31	49	29

16	58	15	29	39	35

$71 - 7 = \square \rightarrow \boxed{\text{W}}$

$49 - 9 = \square \rightarrow \boxed{\text{B}}$

$71 - 32 = \square \rightarrow \boxed{\text{A}}$

$36 - 1 = \square \rightarrow \boxed{\text{D}}$

$85 - 27 = \square \rightarrow \boxed{\text{H}}$

$97 - 21 = \square \rightarrow \boxed{\text{F}}$

$41 - 10 = \square \rightarrow \boxed{\text{L}}$

$80 - 6 = \square \rightarrow \boxed{\text{C}}$

$32 - 10 = \square \rightarrow \boxed{\text{O}}$

$58 - 29 = \square \rightarrow \boxed{\text{E}}$

$55 - 6 = \square \rightarrow \boxed{\text{U}}$

$28 - 15 = \square \rightarrow \boxed{\text{N}}$

$35 - 20 = \square \rightarrow \boxed{\text{R}}$

$17 - 1 = \square \rightarrow \boxed{\text{T}}$

Scratch space:

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

To unlock the shoe safe we must find how many more studs are needed to make ten.

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:

$10 + \underline{\quad} = 11$

$10 + \underline{\quad} = 19$

$8 + \underline{\quad} = 18$

$4 + \underline{\quad} = 11$

$9 + \underline{\quad} = 14$

$1 + \underline{\quad} = 7$

$2 + \underline{\quad} = 13$

$6 + \underline{\quad} = 9$

$3 + \underline{\quad} = 7$

$2 + \underline{\quad} = 10$

$2 + \underline{\quad} = 4$

Step 2 - cross out the sentence with each answer:

1. The villain sneaks around in classic clogs, then snaps on a cute kitten charm.
2. The villain stomps loudly in mega platforms, then snaps on a cute kitten charm.
3. The villain stomps loudly in mega platforms, then leaves a laser dino charm.
4. The villain dances past in sporty sandals, then drops a glow star charm.
5. The villain dances past in sporty sandals, then loses a slice pizza charm.
6. The villain marches along in all terrain boots, then loses a slice pizza charm.
7. The villain dances past in sporty sandals, then polishes a shiny robot charm.
8. The villain stomps loudly in mega platforms, then polishes a shiny robot charm.
9. The villain glides fast in swift slides, then drops a glow star charm.
10. The villain marches along in all terrain boots, then leaves a laser dino charm.
11. The villain stomps loudly in mega platforms, then loses a slice pizza charm.
12. The villain stomps loudly in mega platforms, then drops a glow star charm.

Answer Key

The Great Shoe Charm Caper

Culprit: Lily

Mega Platform · Glow Star Charm · Right Foot Lead · Cool Blue Thread · Bubbly Soap

Trail: Start 21 → Clue 1 16 → Clue 2 10 → Clue 3 6 → Clue 4 4 → Clue 5 1

Clue 1 (Addition): "THE THIEF HAS NO ROBOT CHARM"

$25 + 60 = 85$ (T) · $28 + 28 = 56$ (N) · $35 + 52 = 87$ (O) · $15 + 10 = 25$ (C) · $23 + 37 = 60$ (H) · $23 + 19 = 42$ (S) · $14 + 10 = 24$ (I) · $19 + 8 = 27$ (M) · $26 + 51 = 77$ (R) · $34 + 62 = 96$ (A) · $10 + 23 = 33$ (B) · $27 + 16 = 43$ (F) · $38 + 53 = 91$ (E)

Clue 2 (Place value): "THE SHOE PRINTS START WITH THE RIGHT FOOT"

What number has 1 ten and 8 ones? = 18 (T) · What number has 7 tens and 5 ones? = 75 (I) · What number has 3 tens and 7 ones? = 37 (A) · What number has 4 tens and 3 ones? = 43 (N) · What number has 3 tens and 3 ones? = 33 (H) · What number has 4 tens and 7 ones? = 47 (W) · What number has 5 tens and 9 ones? = 59 (G) · What number has 9 tens and 6 ones? = 96 (F) · What number has 5 tens and 7 ones? = 57 (S) · What number has 3 tens and 0 ones? = 30 (E) · What number has 6 tens and 3 ones? = 63 (R) · What number has 6 tens and 2 ones? = 62 (P) · What number has 3 tens and 1 one? = 31 (O)

Clue 3 (Multiplication facts (1-12)): "THE THIEF LOVES BUBBLY SOAP"

$2 \times 4 = 8$ (T) · $9 \times 7 = 63$ (L) · $8 \times 11 = 88$ (I) · $5 \times 3 = 15$ (U) · $1 \times 7 = 7$ (H) · $1 \times 9 = 9$ (E) · $11 \times 6 = 66$ (F) · $8 \times 10 = 80$ (B) · $11 \times 5 = 55$ (P) · $10 \times 10 = 100$ (V) · $5 \times 10 = 50$ (O) · $9 \times 9 = 81$ (Y) · $8 \times 8 = 64$ (A) · $6 \times 7 = 42$ (S)

Clue 4 (Subtraction): "WE FOUND COOL BLUE THREAD"

$71 - 7 = 64$ (W) · $49 - 9 = 40$ (B) · $71 - 32 = 39$ (A) · $36 - 1 = 35$ (D) · $85 - 27 = 58$ (H) · $97 - 21 = 76$ (F) · $41 - 10 = 31$ (L) · $80 - 6 = 74$ (C) · $32 - 10 = 22$ (O) · $58 - 29 = 29$ (E) · $55 - 6 = 49$ (U) · $28 - 15 = 13$ (N) · $35 - 20 = 15$ (R) · $17 - 1 = 16$ (T)

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

$10 + \underline{\quad} = 11 = 1$ · $10 + \underline{\quad} = 19 = 9$ · $8 + \underline{\quad} = 18 = 10$ · $4 + \underline{\quad} = 11 = 7$ · $9 + \underline{\quad} = 14 = 5$ · $1 + \underline{\quad} = 7 = 6$ · $2 + \underline{\quad} = 13 = 11$ · $6 + \underline{\quad} = 9 = 3$ · $3 + \underline{\quad} = 7 = 4$ · $2 + \underline{\quad} = 10 = 8$ · $2 + \underline{\quad} = 4 = 2$