



The Great Toy Bin Mix-Up

Grade 2 math · Addition, Multi-step word problems, Subtraction, Place value, Missing addends · Reading level grades 1-2

Detective: _____ **Date:** _____

Oh no! The Golden Brick is missing from the Brick City Sorting Room! A sneaky Brick Bandit mixed up all the neat toy bins and took the prize. We must find the bandit and restore order to our bricks!

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 Brick Bandit is _____

Possible suspects

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

NAME	SORTING POWER	BUILDING POWER	SORTING HAND	MINIFIG HAIR	BANDIT TRAP
Leo Link	Baseplate lining skill	Red brick hoarding	Right handed sorter	Black slicked hair	Loud brick separator
Rex Ridge	Brick separating power	Blue plate sorting	Right handed sorter	Black slicked hair	Sticky building tape
Alex Brick	Baseplate lining skill	Clear brick shining	Right handed sorter	Yellow plastic hair	Sticky building tape
Val Valve	Color sorting vision	Red brick hoarding	Left handed sorter	Black slicked hair	Loud brick separator
Hal Hub	Brick sorting speed	Clear brick shining	Left handed sorter	Brown spiky hair	Slippery soap water
Jon Joint	Plates stacking height	Clear brick shining	Right handed sorter	Black slicked hair	Loud brick separator
Ella Edge	Plates stacking height	Green baseplate snapping	Right handed sorter	Black slicked hair	Loud brick separator
Owen Organ	Brick sorting speed	Clear brick shining	Right handed sorter	Black slicked hair	Sticky building tape
Gabe Glue	Brick sorting speed	Blue plate sorting	Left handed sorter	Yellow plastic hair	Sticky building tape
Tess Tile	Brick sorting speed	Red brick hoarding	Right handed sorter	Black slicked hair	Loud brick separator
Quip Quick	Brick sorting speed	Blue plate sorting	Left handed sorter	Black slicked hair	Sticky building tape
Peg Plate	Brick separating power	Red brick hoarding	Left handed sorter	Yellow plastic hair	Slippery soap water
Dan Dome	Brick sorting speed	Red brick hoarding	Right handed sorter	Brown spiky hair	Slippery soap water
Cara Clay	Color sorting vision	Blue plate sorting	Left handed sorter	Brown spiky hair	Sticky building tape
Kai Knob	Baseplate lining skill	Green baseplate snapping	Left handed sorter	Black slicked hair	Loud brick separator
Sam Stud	Brick sorting speed	Yellow brick stacking	Right handed sorter	Black slicked hair	Loud brick separator
Fay Frame	Brick sorting speed	Red brick hoarding	Right handed sorter	Yellow plastic hair	Slippery soap water
Wes Wedge	Plates stacking height	Green baseplate snapping	Left handed sorter	Brown spiky hair	Loud brick separator
Zoe Zone	Color sorting vision	Blue plate sorting	Right handed sorter	Black slicked hair	Slippery soap water
Uma Unit	Baseplate lining skill	Green baseplate snapping	Right handed sorter	Brown spiky hair	Slippery soap water
Ben Block	Brick sorting speed	Blue plate sorting	Right handed sorter	Yellow plastic hair	Loud brick separator

CLUE 1 Addition

The builder counts the red bricks. Then they add the blue plates. Finally they take away the yellow studs to find our first clue.

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

N						N										
34	38	75	26	43	43	34	47	73	89	43	82	65	73	62	43	

	N					N								N					
89	34	73	82	82	70	34	75	32	38	26	62	25	43	47	73	34	48	70	62

$21 + 13 = \square \rightarrow$ N	$31 + 16 = \square \rightarrow$ B	$51 + 24 = \square \rightarrow$ G
$27 + 62 = \square \rightarrow$ S	$15 + 17 = \square \rightarrow$ F	$49 + 21 = \square \rightarrow$ I
$23 + 39 = \square \rightarrow$ T	$47 + 26 = \square \rightarrow$ A	$17 + 31 = \square \rightarrow$ D
$13 + 12 = \square \rightarrow$ H	$14 + 24 = \square \rightarrow$ O	$17 + 9 = \square \rightarrow$ R
$20 + 23 = \square \rightarrow$ E	$31 + 51 = \square \rightarrow$ P	$35 + 30 = \square \rightarrow$ L

Scratch space:

CLUE 2

Multi-step word problems

We find a pile of green plates. We find another pile of blue plates. Let us add them together to unlock this clue.

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

A witness saw the villain was

R									D	E	D	S	O	R		E	R
21	30	29	33	6	33	23	27					21	6			21	

Brick Sorter Billy collected 58 bricks in the morning and 68 bricks in the afternoon, then split them equally among 6 Team Builders. How many bricks did each get?

Answer: → **R**

There were 232 studs in all. 25 studs were set aside. The rest were shared equally among 9 Team Builders. How many studs did each get?

Answer: → **A**

Brick Sorter Billy filled 7 boxes with 4 studs each, then found 5 more studs. How many studs are there in all?

Answer: → **H**

There were 72 separators in all. 12 separators were set aside. The rest were shared equally among 2 Team Builders. How many separators did each get?

Answer: → **I**

Brick Sorter Billy earned 2 studs in each of 3 rounds, plus 6 bonus studs. Then 6 studs were lost. How many studs are left?

Answer: → **T**

Brick Sorter Billy earned 6 minifigures in each of 5 rounds, plus 7 bonus minifigures. Then 10 minifigures were lost. How many minifigures are left?

Answer: → **N**

Brick Sorter Billy collected 82 minifigures in the morning and 92 minifigures in the afternoon, then split them equally among 6 Team Builders. How many minifigures did each get?

Answer: → **G**

Scratch space:

CLUE 3

Subtraction

The bandit dropped some bricks. We take away the broken ones. Subtracting them tells us where to look next.

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

L																	
78	42	84	69	56	23	82	40	41	71	32	35	86	23	86	81	42	23
71	40	86	23	32	71	81	70	32	56	86	17	69	82	81			

$101 - 23 = \square \rightarrow \boxed{\text{L}}$

$42 - 19 = \square \rightarrow \boxed{\text{R}}$

$69 - 37 = \square \rightarrow \boxed{\text{E}}$

$103 - 32 = \square \rightarrow \boxed{\text{S}}$

$115 - 29 = \square \rightarrow \boxed{\text{A}}$

$80 - 11 = \square \rightarrow \boxed{\text{D}}$

$102 - 21 = \square \rightarrow \boxed{\text{T}}$

$103 - 19 = \square \rightarrow \boxed{\text{U}}$

$76 - 20 = \square \rightarrow \boxed{\text{B}}$

$50 - 10 = \square \rightarrow \boxed{\text{C}}$

$62 - 20 = \square \rightarrow \boxed{\text{O}}$

$61 - 26 = \square \rightarrow \boxed{\text{P}}$

$81 - 40 = \square \rightarrow \boxed{\text{K}}$

$23 - 6 = \square \rightarrow \boxed{\text{N}}$

$80 - 10 = \square \rightarrow \boxed{\text{H}}$

$121 - 39 = \square \rightarrow \boxed{\text{I}}$

Scratch space:

CLUE 4 Place value

We count the toy bricks in groups of ten. The tens and ones show us a secret code on the side of the storage bin.

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

B																			
64	56	49	18	73	94	56	52	18	73	45	95	99	49	52	98	46	49	94	
56	45	90	89	49	89	89	99	45	94	18	45	88	45						

What number has 6 tens and 4 ones? → **B**

What number has 9 tens and 5 ones? → **D**

What number has 7 tens and 3 ones? → **K**

What number has 9 tens and 9 ones? → **H**

What number has 4 tens and 9 ones? → **A**

What number has 4 tens and 6 ones? → **W**

What number has 9 tens and 8 ones? → **R**

What number has 4 tens and 5 ones? → **E**

What number has 5 tens and 6 ones? → **L**

What number has 9 tens and 0 ones? → **F**

What number has 8 tens and 8 ones? → **N**

What number has 1 ten and 8 ones? → **C**

What number has 8 tens and 9 ones? → **T**

What number has 5 tens and 2 ones? → **I**

What number has 9 tens and 4 ones? → **S**

Scratch space:

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

We need ten red bricks to fix the wall. We only have six in our hand. How many more do we need 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:

$8 + \underline{\quad} = 13$

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

$6 + \underline{\quad} = 15$

$8 + \underline{\quad} = 11$

$7 + \underline{\quad} = 19$

$7 + \underline{\quad} = 17$

$1 + \underline{\quad} = 12$

$4 + \underline{\quad} = 8$

$2 + \underline{\quad} = 8$

$4 + \underline{\quad} = 5$

$8 + \underline{\quad} = 15$

Step 2 - cross out the sentence with each answer:

1. The villain uses color sorting vision, then sorts blue plates.
2. The villain stacks plates very high, then makes clear bricks shine.
3. The villain uses color sorting vision, then hoards red bricks.
4. The villain sorts bricks by speed, then sorts blue plates.
5. The villain sorts bricks by speed, then hoards red bricks.
6. The villain stacks plates very high, then hoards red bricks.
7. The villain separates bricks with power, then makes clear bricks shine.
8. The villain lines up baseplates, then hoards red bricks.
9. The villain sorts bricks by speed, then stacks yellow bricks.
10. The villain separates bricks with power, then hoards red bricks.
11. The villain sorts bricks by speed, then makes clear bricks shine.
12. The villain lines up baseplates, then stacks yellow bricks.

Answer Key

The Great Toy Bin Mix-Up

Culprit: Jon Joint

Plates stacking height · Clear brick shining · Right handed sorter · Black slicked hair · Loud brick separator

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

Clue 1 (Addition): "NO GREEN BASEPLATE SNAPPING FOR THE BANDIT"

$21 + 13 = 34$ (N) · $31 + 16 = 47$ (B) · $51 + 24 = 75$ (G) · $27 + 62 = 89$ (S) · $15 + 17 = 32$ (F) · $49 + 21 = 70$ (I) · $23 + 39 = 62$ (T) · $47 + 26 = 73$ (A) · $17 + 31 = 48$ (D) · $13 + 12 = 25$ (H) · $14 + 24 = 38$ (O) · $17 + 9 = 26$ (R) · $20 + 23 = 43$ (E) · $31 + 51 = 82$ (P) · $35 + 30 = 65$ (L)

Clue 2 (Multi-step word problems): "RIGHT HANDED SORTER"

Brick Sorter Billy collected 58 bricks in the morning and 68 bricks in the afternoon, then split them equally among 6 Team Builders. How many bricks did each get? = 21 (R) · There were 232 studs in all. 25 studs were set aside. The rest were shared equally among 9 Team Builders. How many studs did each get? = 23 (A) · Brick Sorter Billy filled 7 boxes with 4 studs each, then found 5 more studs. How many studs are there in all? = 33 (H) · There were 72 separators in all. 12 separators were set aside. The rest were shared equally among 2 Team Builders. How many separators did each get? = 30 (I) · Brick Sorter Billy earned 2 studs in each of 3 rounds, plus 6 bonus studs. Then 6 studs were lost. How many studs are left? = 6 (T) · Brick Sorter Billy earned 6 minifigures in each of 5 rounds, plus 7 bonus minifigures. Then 10 minifigures were lost. How many minifigures are left? = 27 (N) · Brick Sorter Billy collected 82 minifigures in the morning and 92 minifigures in the afternoon, then split them equally among 6 Team Builders. How many minifigures did each get? = 29 (G)

Clue 3 (Subtraction): "LOUD BRICK SEPARATOR SCARES THE BANDIT"

$101 - 23 = 78$ (L) · $42 - 19 = 23$ (R) · $69 - 37 = 32$ (E) · $103 - 32 = 71$ (S) · $115 - 29 = 86$ (A) · $80 - 11 = 69$ (D) · $102 - 21 = 81$ (T) · $103 - 19 = 84$ (U) · $76 - 20 = 56$ (B) · $50 - 10 = 40$ (C) · $62 - 20 = 42$ (O) · $61 - 26 = 35$ (P) · $81 - 40 = 41$ (K) · $23 - 6 = 17$ (N) · $80 - 10 = 70$ (H) · $121 - 39 = 82$ (I)

Clue 4 (Place value): "BLACK SLICKED HAIR WAS LEFT AT THE SCENE"

What number has 6 tens and 4 ones? = 64 (B) · What number has 9 tens and 5 ones? = 95 (D) · What number has 7 tens and 3 ones? = 73 (K) · What number has 9 tens and 9 ones? = 99 (H) · What number has 4 tens and 9 ones? = 49 (A) · What number has 4 tens and 6 ones? = 46 (W) · What number has 9 tens and 8 ones? = 98 (R) · What number has 4 tens and 5 ones? = 45 (E) · What number has 5 tens and 6 ones? = 56 (L) · What number has 9 tens and 0 ones? = 90 (F) · What number has 8 tens and 8 ones? = 88 (N) · What number has 1 ten and 8 ones? = 18 (C) · What number has 8 tens and 9 ones? = 89 (T) · What number has 5 tens and 2 ones? = 52 (I) · What number has 9 tens and 4 ones? = 94 (S)

Clue 5 (Missing addends): surviving statement is box 2 → Jon Joint

$8 + \underline{\quad} = 13 = 5$ · $2 + \underline{\quad} = 10 = 8$ · $6 + \underline{\quad} = 15 = 9$ · $8 + \underline{\quad} = 11 = 3$ · $7 + \underline{\quad} = 19 = 12$ · $7 + \underline{\quad} = 17 = 10$ · $1 + \underline{\quad} = 12 = 11$ · $4 + \underline{\quad} = 8 = 4$ · $2 + \underline{\quad} = 8 = 6$ · $4 + \underline{\quad} = 5 = 1$ · $8 + \underline{\quad} = 15 = 7$