

The Great Cookie Crumb Caper

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

Detective: _____ Date: _____

Oh no! The Golden Whisk has been stolen from the kitchen right before the Great Bake-Off! One of the cookie apprentices is secretly the Crumb Bandit. We need to solve the clues to find out who took it!

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 Crumb Bandit is _____

Possible suspects

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

NAME	COOKIE MAGIC	SECRET INGREDIENT	MIXING STYLE	BAKER HAT COLOR	COOKIE WEAKNESS
Toby Tuile	frosting swirling	marshmallow fluff	left handed mixer	blue baker hat	soggy dough
Gaby Ginger	frosting swirling	marshmallow fluff	right handed mixer	red baker hat	stale crumbs
Quinn Quince	sprinkle blasting	cinnamon swirl	right handed mixer	blue baker hat	soggy dough
Wally Wafer	frosting swirling	marshmallow fluff	left handed mixer	pink baker hat	soggy dough
Rosie Raisin	chocolate melting	lemon zest	right handed mixer	blue baker hat	soggy dough
Dana Doughnut	sprinkle blasting	lemon zest	right handed mixer	blue baker hat	burnt cookies
Katie Krumble	sugar dusting	marshmallow fluff	right handed mixer	blue baker hat	soggy dough
Charlie Chip	dough rolling	peppermint bark	right handed mixer	blue baker hat	soggy dough
Fiona Fudge	sprinkle blasting	salted caramel	left handed mixer	blue baker hat	burnt cookies
Uma Ube	dough rolling	lemon zest	right handed mixer	blue baker hat	soggy dough
Leo Lemon	sprinkle blasting	marshmallow fluff	left handed mixer	red baker hat	stale crumbs
Izzy Icing	frosting swirling	lemon zest	left handed mixer	blue baker hat	stale crumbs
Jack Jelly	frosting swirling	peppermint bark	left handed mixer	blue baker hat	burnt cookies
Elmo Oatmeal	sprinkle blasting	marshmallow fluff	right handed mixer	red baker hat	soggy dough
Mac Macaron	dough rolling	salted caramel	right handed mixer	blue baker hat	soggy dough
Abby Alfajor	chocolate melting	cinnamon swirl	left handed mixer	pink baker hat	soggy dough
Zach Zest	sugar dusting	marshmallow fluff	left handed mixer	red baker hat	stale crumbs
Sammy Snickerdoodle	sprinkle blasting	salted caramel	right handed mixer	blue baker hat	stale crumbs
Nelly Nougat	sprinkle blasting	lemon zest	right handed mixer	red baker hat	soggy dough
Ollie Oreo	frosting swirling	salted caramel	right handed mixer	pink baker hat	soggy dough
Benny Biscotti	frosting swirling	lemon zest	right handed mixer	red baker hat	stale crumbs

CLUE 1 Addition

We count the baking sheets on the left wall and add the ones on the right wall to find the total.

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

T								T											
579	392	964	593	965	366	878	276	579	878	571	964	663	366	571	579	443	663	964	

								T
644	964	202	571	366	887	964	663	579

$287 + 292 = \square \rightarrow \text{[T]}$	$593 + 285 = \square \rightarrow \text{[D]}$	$131 + 71 = \square \rightarrow \text{[M]}$
$117 + 159 = \square \rightarrow \text{[I]}$	$296 + 297 = \square \rightarrow \text{[B]}$	$624 + 341 = \square \rightarrow \text{[A]}$
$419 + 244 = \square \rightarrow \text{[S]}$	$279 + 608 = \square \rightarrow \text{[Z]}$	$400 + 171 = \square \rightarrow \text{[O]}$
$633 + 331 = \square \rightarrow \text{[E]}$	$237 + 155 = \square \rightarrow \text{[H]}$	$203 + 163 = \square \rightarrow \text{[N]}$
$449 + 195 = \square \rightarrow \text{[L]}$	$147 + 296 = \square \rightarrow \text{[U]}$	

Scratch space:

CLUE 2 Subtraction

The baker had a big bag of chocolate chips but spilled some. Subtracting the spilled chips reveals a secret message.

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

T 751	699	247	T 751	699	640	247	406	515	T 751	640	764	515	130	640	T 751	699
T 751	699	247	764	640	739	699	T 751	699	549	613	615					

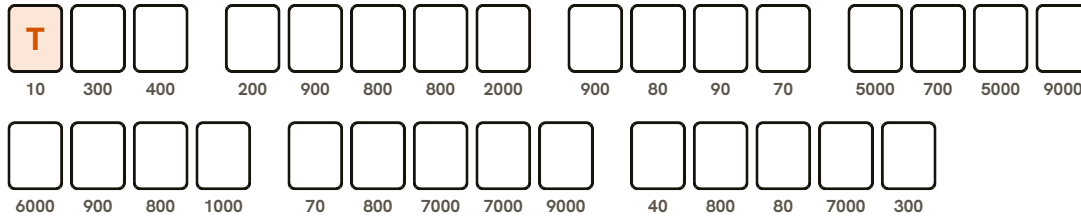
$804 - 53 = \square \rightarrow \boxed{\text{T}}$	$863 - 164 = \square \rightarrow \boxed{\text{H}}$	$1080 - 316 = \square \rightarrow \boxed{\text{R}}$
$789 - 174 = \square \rightarrow \boxed{\text{D}}$	$425 - 178 = \square \rightarrow \boxed{\text{E}}$	$883 - 334 = \square \rightarrow \boxed{\text{A}}$
$690 - 284 = \square \rightarrow \boxed{\text{F}}$	$390 - 260 = \square \rightarrow \boxed{\text{W}}$	$884 - 271 = \square \rightarrow \boxed{\text{N}}$
$752 - 13 = \square \rightarrow \boxed{\text{G}}$	$780 - 140 = \square \rightarrow \boxed{\text{I}}$	$727 - 212 = \square \rightarrow \boxed{\text{S}}$

Scratch space:

CLUE 3 Place value

We look at the boxes of cookie dough stacked in tens and ones. The place value of the boxes reveals a hidden code on the shelf.

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



What is the value of the 1 in 7,819? → **T**

What is the value of the 8 in 780? → **U**

What is the value of the 2 in 1,238? → **C**

What is the value of the 2 in 32,405? → **K**

What is the value of the 3 in 9,349? → **H**

What is the value of the 9 in 982? → **R**

What is the value of the 7 in 274? → **S**

What is the value of the 4 in 642? → **D**

What is the value of the 4 in 5,475? → **E**

What is the value of the 9 in 2,498? → **N**

What is the value of the 7 in 755? → **W**

What is the value of the 9 in 9,568? → **Y**

What is the value of the 1 in 71,769? → **M**

What is the value of the 6 in 6,897? → **F**

What is the value of the 8 in 806? → **O**

What is the value of the 7 in 7,509? → **G**

What is the value of the 5 in 5,604? → **A**

Scratch space:

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

We split thirty fresh cookies equally among five clean plates. The number of cookies on each plate unlocks the safe.

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:

$120 \div 12 = \boxed{}$

$28 \div 7 = \boxed{}$

$48 \div 4 = \boxed{}$

$88 \div 11 = \boxed{}$

$21 \div 7 = \boxed{}$

$20 \div 4 = \boxed{}$

$60 \div 10 = \boxed{}$

$8 \div 8 = \boxed{}$

$22 \div 11 = \boxed{}$

$36 \div 4 = \boxed{}$

$11 \div 1 = \boxed{}$

Step 2 - cross out the sentence with each answer:

1. The villain swirls sticky frosting on the walls, then sticks things with marshmallow fluff.
2. The villain dusts sugar to hide their tracks, then drops a piece of peppermint bark.
3. The villain melts chocolate over the keys, then drips gooey salted caramel.
4. The villain sprinkle blasts the floor, then leaves a scent of cinnamon.
5. The villain swirls sticky frosting on the walls, then squeezes a bit of lemon zest.
6. The villain swirls sticky frosting on the walls, then drops a piece of peppermint bark.
7. The villain dusts sugar to hide their tracks, then sticks things with marshmallow fluff.
8. The villain dusts sugar to hide their tracks, then drips gooey salted caramel.
9. The villain sprinkle blasts the floor, then drips gooey salted caramel.
10. The villain rolls out giant dough barriers, then drops a piece of peppermint bark.
11. The villain sprinkle blasts the floor, then sticks things with marshmallow fluff.
12. The villain rolls out giant dough barriers, then drips gooey salted caramel.

Answer Key

The Great Cookie Crumb Caper

Culprit: Katie Krumble

sugar dusting · marshmallow fluff · right handed mixer · blue baker hat · soggy dough

Trail: Start 21 → Clue 1 15 → Clue 2 8 → Clue 3 6 → Clue 4 4 → Clue 5 1

Clue 1 (Addition): "THE BANDIT DOES NOT USE LEMON ZEST"

$287 + 292 = 579$ (T) · $593 + 285 = 878$ (D) · $131 + 71 = 202$ (M) · $117 + 159 = 276$ (I) · $296 + 297 = 593$ (B) · $624 + 341 = 965$ (A) · $419 + 244 = 663$ (S) · $279 + 608 = 887$ (Z) · $400 + 171 = 571$ (O) · $633 + 331 = 964$ (E) · $237 + 155 = 392$ (H) · $203 + 163 = 366$ (N) · $449 + 195 = 644$ (L) · $147 + 296 = 443$ (U)

Clue 2 (Subtraction): "THE THIEF STIRS WITH THE RIGHT HAND"

$804 - 53 = 751$ (T) · $863 - 164 = 699$ (H) · $1080 - 316 = 764$ (R) · $789 - 174 = 615$ (D) · $425 - 178 = 247$ (E) · $883 - 334 = 549$ (A) · $690 - 284 = 406$ (F) · $390 - 260 = 130$ (W) · $884 - 271 = 613$ (N) · $752 - 13 = 739$ (G) · $780 - 140 = 640$ (I) · $727 - 212 = 515$ (S)

Clue 3 (Place value): "THE CROOK RUNS AWAY FROM SOGGY DOUGH"

What is the value of the 1 in 7,819? = 10 (T) · What is the value of the 8 in 780? = 80 (U) · What is the value of the 2 in 1,238? = 200 (C) · What is the value of the 2 in 32,405? = 2000 (K) · What is the value of the 3 in 9,349? = 300 (H) · What is the value of the 9 in 982? = 900 (R) · What is the value of the 7 in 274? = 70 (S) · What is the value of the 4 in 642? = 40 (D) · What is the value of the 4 in 5,475? = 400 (E) · What is the value of the 9 in 2,498? = 90 (N) · What is the value of the 7 in 755? = 700 (W) · What is the value of the 9 in 9,568? = 9000 (Y) · What is the value of the 1 in 71,769? = 1000 (M) · What is the value of the 6 in 6,897? = 6000 (F) · What is the value of the 8 in 806? = 800 (O) · What is the value of the 7 in 7,509? = 7000 (G) · What is the value of the 5 in 5,604? = 5000 (A)

Clue 4 (Bar model word problems): "BLUE BAKER HAT"

One group collected 6 mixing bowls and another group collected 7 mixing bowls. How many mixing bowls in all? = 13 (B) · Baker has 200 sprinkles, packed 10 to a bag. How many bags can be filled? = 20 (K) · The red team has 34 sprinkles and the blue team has 24 sprinkles. How many more sprinkles does the red team have? = 10 (E) · There were 68 sprinkles in all. 26 sprinkles were used. How many sprinkles are left? = 42 (U) · There were 60 baking sheets in all. 23 baking sheets were used. How many baking sheets are left? = 37 (R) · There were 59 cookie cutters in all. 32 cookie cutters were used. How many cookie cutters are left? = 27 (A) · Baker has 2 times as many chocolate chips as a teammate. The teammate has 6 chocolate chips. How many chocolate chips does baker have? = 12 (L)

Clue 5 (Division facts (1-12)): surviving statement is box 7 → Katie Krumble

$120 \div 12 = 10$ · $28 \div 7 = 4$ · $48 \div 4 = 12$ · $88 \div 11 = 8$ · $21 \div 7 = 3$ · $20 \div 4 = 5$ · $60 \div 10 = 6$ · $8 \div 8 = 1$ · $22 \div 11 = 2$ · $36 \div 4 = 9$ · $11 \div 1 = 11$