The Case of the Missing Cupcake

Grade 1 math · Addition, Subtraction, Word problems, Skip counting, Missing addends · Reading level grades 1-2

Detective: _____ **Date:** _____

Oh no! The giant golden cupcake is missing from the prize table! The Room 2B party just started. We must find the Cupcake Snatcher before the big recess bell rings!

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 Cupcake Snatcher is _____

Possible suspects

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

NAME	PARTY GEAR	LEFTOVER CLUE	FROSTING HAND	MESSY HAIR	PARTY FEAR
Emma	sprinkle blaster	sugar wrapper	right handed scoop	frosting on black hair	bright camera flash
Ivy	balloon glider	frosting swirl	left handed scoop	frosting on black hair	bright camera flash
Ruby	balloon glider	frosting swirl	left handed scoop	frosting on brown hair	party whistle
Henry	frosting shield	sprinkle trail	right handed scoop	frosting on blonde hair	bright camera flash
Ella	candle flashlight	sugar wrapper	right handed scoop	frosting on blonde hair	bright camera flash
Benny	balloon glider	sugar wrapper	left handed scoop	frosting on blonde hair	party whistle
Finn	candle flashlight	sugar wrapper	right handed scoop	frosting on black hair	bright camera flash
Leo	frosting shield	sprinkle trail	right handed scoop	frosting on black hair	bright camera flash
Jack	sprinkle blaster	frosting swirl	left handed scoop	frosting on black hair	bright camera flash
Luke	candle flashlight	sugar wrapper	left handed scoop	frosting on blonde hair	squeaky balloon
Grace	candle flashlight	frosting swirl	left handed scoop	frosting on black hair	party whistle
Danny	candle flashlight	frosting swirl	right handed scoop	frosting on blonde hair	bright camera flash
Peter	candle flashlight	sprinkle trail	left handed scoop	frosting on blonde hair	squeaky balloon
Toby	glitter bomb	sprinkle trail	right handed scoop	frosting on black hair	party whistle
Mia	candle flashlight	sprinkle trail	left handed scoop	frosting on black hair	party whistle
Noah	frosting shield	sugar wrapper	left handed scoop	frosting on blonde hair	party whistle
Zoe	sprinkle blaster	cookie crumb	right handed scoop	frosting on black hair	bright camera flash
Mason	frosting shield	frosting swirl	right handed scoop	frosting on blonde hair	squeaky balloon
Olivia	frosting shield	cookie crumb	left handed scoop	frosting on blonde hair	party whistle
Katie	frosting shield	sugar wrapper	right handed scoop	frosting on black hair	bright camera flash
Quinn	sprinkle blaster	cookie crumb	right handed scoop	frosting on brown hair	squeaky balloon

CLUE 1 Addition

> We count the juice boxes on the table to see how many kids are here.

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

T						T										
7	20	18	9	5	13	7	12	20	18	19	20	13	9	5	16	

12	16	16	6	4	18	12	19	11	14	15	9

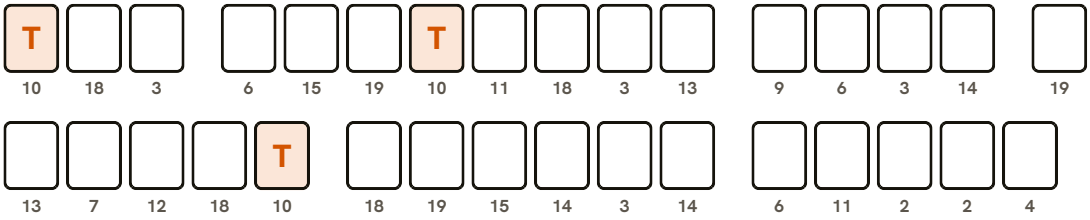
2 + 5 = ☐ → T	5 + 10 = ☐ → B	4 + 12 = ☐ → O	
5 + 1 = ☐ → K	6 + 13 = ☐ → R	2 + 2 = ☐ → I	
11 + 7 = ☐ → E	7 + 4 = ☐ → U	5 + 4 = ☐ → S	9 + 5 = ☐ → M
6 + 7 = ☐ → A	7 + 13 = ☐ → H	4 + 1 = ☐ → N	4 + 8 = ☐ → C

Scratch space:

CLUE 2 Subtraction

Some party hats went missing from the box. Let us subtract to find how many are left.

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



17 - 7 = ☐ → T

18 - 9 = ☐ → U

13 - 7 = ☐ → S

5 - 3 = ☐ → O

10 - 3 = ☐ → I

20 - 2 = ☐ → H

15 - 1 = ☐ → D

15 - 4 = ☐ → C

20 - 1 = ☐ → A

5 - 2 = ☐ → E

17 - 2 = ☐ → N

14 - 2 = ☐ → G

12 - 8 = ☐ → P

16 - 3 = ☐ → R

Scratch space:

CLUE 3 Word problems

We solve a word problem about the party balloons to get our next big hint.

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

Someone scared the villain off with

B							A	M	E		A		F	L	A	S			.
21	18	12	30	17	32	40				18							17		

There were 29 napkins. 8 were used up. How many napkins are left?

Answer: ☐ → **B**

There were 35 juice boxes. 5 were used up. How many juice boxes are left?

Answer: ☐ → **G**

Timmy the Helper lined up 8 rows of 4 juice boxes. How many juice boxes in all?

Answer: ☐ → **T**

There were 21 juice boxes. 9 were used up. How many juice boxes are left?

Answer: ☐ → **I**

Timmy the Helper lined up 2 rows of 9 party cups. How many party cups in all?

Answer: ☐ → **R**

Timmy the Helper found 12 balloons yesterday and 5 more today. How many balloons in all?

Answer: ☐ → **H**

Timmy the Helper lined up 10 rows of 4 napkins. How many napkins in all?

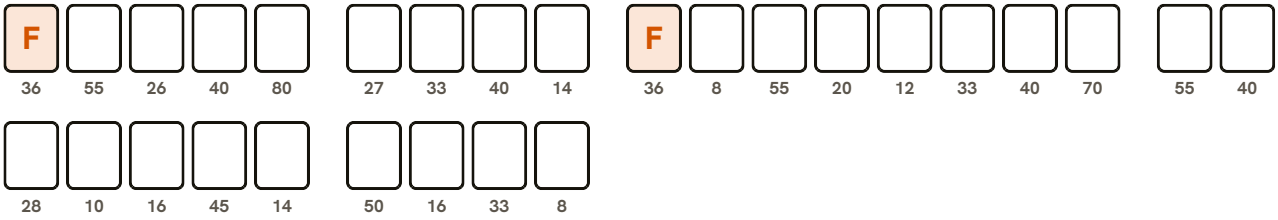
Answer: ☐ → **C**

Scratch space:

CLUE 4 Skip counting

We skip count the rows of paper plates on the counter to find a clue.

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



Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, 21, 24, 27, 30, 33, ___, 39, 42 ☐ → F

Skip-count by 5s. Fill the blank: 5, 10, 15, 20, 25, 30, 35, 40, 45, 50, ___, 60, 65 ☐ → O

Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, 60, ___, 80, 90 ☐ → G

Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, 21, 24, ___, 30, 33 ☐ → P

Skip-count by 2s. Fill the blank: 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, ___, 28, 30 ☐ → U

Skip-count by 2s. Fill the blank: 2, 4, 6, 8, ___, 12, 14 ☐ → L

Skip-count by 2s. Fill the blank: 2, 4, 6, 8, 10, 12, 14, 16, 18, ___, 22, 24 ☐ → S

Skip-count by 5s. Fill the blank: 5, 10, 15, 20, 25, 30, 35, 40, ___, 50, 55 ☐ → C

Skip-count by 5s. Fill the blank: 5, 10, 15, 20, 25, 30, 35, ___, 45, 50 ☐ → N

Skip-count by 10s. Fill the blank: 10, 20, 30, 40, ___, 60, 70 ☐ → H

Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, 60, 70, ___, 90, 100 ☐ → D

Skip-count by 2s. Fill the blank: 2, 4, 6, 8, 10, 12, ___, 16, 18 ☐ → K

Skip-count by 2s. Fill the blank: 2, 4, 6, ___, 10, 12 ☐ → R

Skip-count by 2s. Fill the blank: 2, 4, 6, 8, 10, ___, 14, 16 ☐ → **T**

Skip-count by 2s. Fill the blank: 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, 26, ___, 30, 32 ☐ → **B**

Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, 21, 24, 27, 30, ___, 36, 39 ☐ → **I**

Skip-count by 2s. Fill the blank: 2, 4, 6, 8, 10, 12, 14, ___, 18, 20 ☐ → **A**

Scratch space:

CLUE 5 Missing addends - the last clue

> We have some napkins but we need more for the whole class. Let us find the missing number.

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:

6 + ___ = 7 ☐	2 + ___ = 8 ☐	1 + ___ = 13 ☐	7 + ___ = 14 ☐	1 + ___ = 5 ☐
10 + ___ = 12 ☐	2 + ___ = 11 ☐	2 + ___ = 10 ☐	6 + ___ = 11 ☐	
9 + ___ = 12 ☐	2 + ___ = 13 ☐			

Step 2 - cross out the sentence with each answer:

1. The villain holds up the frosting shield, then leaves a sprinkle trail.
2. The villain shines the candle flashlight, then drops a cherry topper.
3. The villain holds up the frosting shield, then drops a cherry topper.
4. The villain throws a glitter bomb, then leaves a sprinkle trail.
5. The villain shines the candle flashlight, then leaves a sprinkle trail.
6. The villain sprays the sprinkle blaster, then leaves a sugar wrapper.
7. The villain throws a glitter bomb, then makes a frosting swirl.
8. The villain shines the candle flashlight, then makes a frosting swirl.
9. The villain holds up the frosting shield, then drops a cookie crumb.
10. The villain holds up the frosting shield, then leaves a sugar wrapper.
11. The villain sprays the sprinkle blaster, then drops a cherry topper.
12. The villain shines the candle flashlight, then leaves a sugar wrapper.

TEACHER / PARENT

Answer Key

The Case of the Missing Cupcake

Culprit: Katie

frosting shield · sugar wrapper · right handed scoop · frosting on black hair · bright camera flash

Trail: Start 21 → Clue 1 18 → Clue 2 9 → Clue 3 7 → Clue 4 4 → Clue 5 1

Clue 1 (Addition): "THE SNATCHER HAS NO COOKIE CRUMBS"

2 + 5 = 7 (T) · 5 + 10 = 15 (B) · 4 + 12 = 16 (O) · 5 + 1 = 6 (K) · 6 + 13 = 19 (R) · 2 + 2 = 4 (I) · 11 + 7 = 18 (E) · 7 + 4 = 11 (U) · 5 + 4 = 9 (S) · 9 + 5 = 14 (M) · 6 + 7 = 13 (A) · 7 + 13 = 20 (H) · 4 + 1 = 5 (N) · 4 + 8 = 12 (C)

Clue 2 (Subtraction): "THE SNATCHER USED A RIGHT HANDED SCOOP"

17 - 7 = 10 (T) · 18 - 9 = 9 (U) · 13 - 7 = 6 (S) · 5 - 3 = 2 (O) · 10 - 3 = 7 (I) · 20 - 2 = 18 (H) · 15 - 1 = 14 (D) · 15 - 4 = 11 (C) · 20 - 1 = 19 (A) · 5 - 2 = 3 (E) · 17 - 2 = 15 (N) · 14 - 2 = 12 (G) · 12 - 8 = 4 (P) · 16 - 3 = 13 (R)

Clue 3 (Word problems): "BRIGHT CAMERA FLASH"

There were 29 napkins. 8 were used up. How many napkins are left? = 21 (B) · There were 35 juice boxes. 5 were used up. How many juice boxes are left? = 30 (G) · Timmy the Helper lined up 8 rows of 4 juice boxes. How many juice boxes in all? = 32 (T) · There were 21 juice boxes. 9 were used up. How many juice boxes are left? = 12 (I) · Timmy the Helper lined up 2 rows of 9 party cups. How many party cups in all? = 18 (R) · Timmy the Helper found 12 balloons yesterday and 5 more today. How many balloons in all? = 17 (H) · Timmy the Helper lined up 10 rows of 4 napkins. How many napkins in all? = 40 (C)

Clue 4 (Skip counting): "FOUND PINK FROSTING ON BLACK HAIR"

Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, 21, 24, 27, 30, 33, ___, 39, 42 = 36 (F) · Skip-count by 5s. Fill the blank: 5, 10, 15, 20, 25, 30, 35, 40, 45, 50, ___, 60, 65 = 55 (O) · Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, 60, ___, 80, 90 = 70 (G) · Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, 21, 24, ___, 30, 33 = 27 (P) · Skip-count by 2s. Fill the blank: 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, ___, 28, 30 = 26 (U) · Skip-count by 2s. Fill the blank: 2, 4, 6, 8, ___, 12, 14 = 10 (L) · Skip-count by 2s. Fill the blank: 2, 4, 6, 8, 10, 12, 14, 16, 18, ___, 22, 24 = 20 (S) · Skip-count by 5s. Fill the blank: 5, 10, 15, 20, 25, 30, 35, 40, ___, 50, 55 = 45 (C) · Skip-count by 5s. Fill the blank: 5, 10, 15, 20, 25, 30, 35, ___, 45, 50 = 40 (N) · Skip-count by 10s. Fill the blank: 10, 20, 30, 40, ___, 60, 70 = 50 (H) · Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, 60, 70, ___, 90, 100 = 80 (D) · Skip-count by 2s. Fill the blank: 2, 4, 6, 8, 10, 12, ___, 16, 18 = 14 (K) · Skip-count by 2s. Fill the blank: 2, 4, 6, ___, 10, 12 = 8 (R) · Skip-count by 2s. Fill the blank: 2, 4, 6, 8, 10, ___, 14, 16 = 12 (T) · Skip-count by 2s. Fill the blank: 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, 26, ___, 30, 32 = 28 (B) · Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, 21, 24, 27, 30, ___, 36, 39 = 33 (I) · Skip-count by 2s. Fill the blank: 2, 4, 6, 8, 10, 12, 14, ___, 18, 20 = 16 (A)

Clue 5 (Missing addends): surviving statement is box 10 → Katie

6 + ___ = 7 = 1 · 2 + ___ = 8 = 6 · 1 + ___ = 13 = 12 · 7 + ___ = 14 = 7 · 1 + ___ = 5 = 4 · 10 + ___ = 12 = 2 · 2 + ___ = 11 = 9 · 2 + ___ = 10 = 8 · 6 + ___ = 11 = 5 · 9 + ___ = 12 = 3 · 2 + ___ = 13 = 11