The Case of the Poisonous Pizza

Grade 3 math · Multiplication, Multi-step word problems, Word problems, Place value, Division · Reading level grades 3-4

Detective: _____ **Date:** _____

Someone is spiking the pizzas at the Pepperoni Palace with zany, green poison sauce! The Head Food Critic is about to take a bite. We must find the Rogue Chef before they ruin dinner!

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 Rogue Chef is _____

Possible suspects

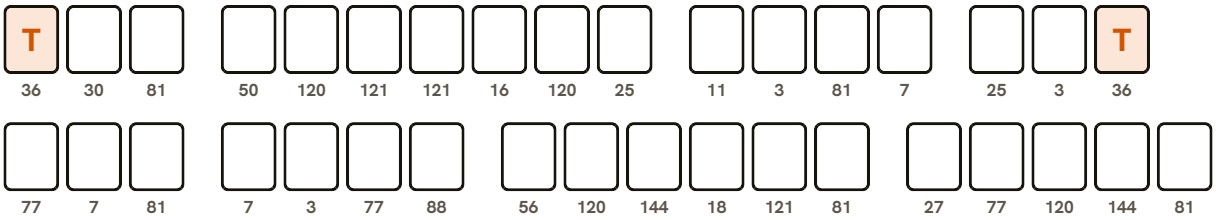
Cross off a row as each clue rules it out. The one left at the end is the culprit.

NAME	POISON ATTACK	SECRET INGREDIENT	PIZZA CUTTER HAND	MESSY HAIR COLOR	KITCHEN COUNTER-ATTACK
Tommy Tomato	Sleeping Cheese	Blue Mold	Right-Handed Cutter	Orange Hair	Soap Suds
Chef Gino	Mushroom Fog	Anchovy Acid	Left-Handed Cutter	Green Hair	Soda Splash
Patty Pan	Mushroom Fog	Ghost Pepper Dust	Right-Handed Cutter	Green Hair	Fresh Basil
Crusty Carla	Slime Sauce	Blue Mold	Right-Handed Cutter	Green Hair	Soap Suds
Benny Baker	Mushroom Fog	Sour Pickle Juice	Right-Handed Cutter	Green Hair	Soap Suds
Chef Marco	Mushroom Fog	Anchovy Acid	Right-Handed Cutter	Purple Hair	Soda Splash
Chef Ronald	Sleeping Cheese	Blue Mold	Left-Handed Cutter	Purple Hair	Soap Suds
Chef Pierre	Mushroom Fog	Mustard Glaze	Right-Handed Cutter	Green Hair	Soda Splash
Chef Wendy	Mushroom Fog	Blue Mold	Left-Handed Cutter	Purple Hair	Fresh Basil
Olivia Oven	Slime Sauce	Anchovy Acid	Right-Handed Cutter	Orange Hair	Soda Splash
Billy Basil	Hot Pepper Blast	Anchovy Acid	Left-Handed Cutter	Orange Hair	Soda Splash
Chef Mario	Mushroom Fog	Sour Pickle Juice	Right-Handed Cutter	Green Hair	Soda Splash
Vicky Veggie	Mushroom Fog	Blue Mold	Left-Handed Cutter	Orange Hair	Fresh Basil
Chef Colonel	Sleeping Cheese	Blue Mold	Right-Handed Cutter	Green Hair	Soda Splash
Penny Pepperoni	Slime Sauce	Mustard Glaze	Right-Handed Cutter	Purple Hair	Fresh Basil
Freddy Flatbread	Sleeping Cheese	Ghost Pepper Dust	Left-Handed Cutter	Green Hair	Soap Suds
Gary Garlic	Hot Pepper Blast	Ghost Pepper Dust	Left-Handed Cutter	Purple Hair	Soda Splash
Danny Dough	Garlic Stink	Anchovy Acid	Left-Handed Cutter	Green Hair	Soap Suds
Bella Mozzarella	Hot Pepper Blast	Ghost Pepper Dust	Right-Handed Cutter	Green Hair	Soda Splash
Sammy Sauce	Mushroom Fog	Ghost Pepper Dust	Right-Handed Cutter	Orange Hair	Soap Suds
Chef Tony	Mushroom Fog	Blue Mold	Right-Handed Cutter	Green Hair	Soda Splash

CLUE 1 Multiplication facts (1-12)

> The suspect left stacks of poisonous pizza boxes in the pantry. We can find the total number of boxes by counting the neat rows.

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



3 × 12 = ☐ → T	12 × 12 = ☐ → C	6 × 3 = ☐ → K
3 × 10 = ☐ → H	5 × 10 = ☐ → V	7 × 1 = ☐ → S
8 × 11 = ☐ → R	3 × 1 = ☐ → O	7 × 8 = ☐ → P
10 × 12 = ☐ → I	11 × 1 = ☐ → D	9 × 9 = ☐ → E
3 × 9 = ☐ → J	7 × 11 = ☐ → U	5 × 5 = ☐ → N
11 × 11 = ☐ → L	4 × 4 = ☐ → A	

Scratch space:

CLUE 2 Multi-step word problems

> We found a recipe card for the poison glaze. It tells us to add bags of salt, subtract the spilled ones, and double the rest.

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	C	U			E	R
7	9	30	16	13	16	29	36						13	13		7

.

Chef Pizza-Pants collected 10 dough balls in the morning and 4 dough balls in the afternoon, then split them equally among 2 The Crust Crusaders. How many dough balls did each get?

Answer: ☐ → **R**

There were 122 aprons in all. 32 aprons were set aside. The rest were shared equally among 10 The Crust Crusaders. How many aprons did each get?

Answer: ☐ → **I**

There were 51 aprons in all. 3 aprons were set aside. The rest were shared equally among 3 The Crust Crusaders. How many aprons did each get?

Answer: ☐ → **H**

There were 196 boxes in all. 16 boxes were set aside. The rest were shared equally among 6 The Crust Crusaders. How many boxes did each get?

Answer: ☐ → **G**

There were 154 dough balls in all. 24 dough balls were set aside. The rest were shared equally among 10 The Crust Crusaders. How many dough balls did each get?

Answer: ☐ → **T**

There were 204 slices in all. 3 The Crust Crusaders used 39 slices each. The other 3 The Crust Crusaders shared the rest equally. How many slices did each of the other The Crust Crusaders get?

Answer: ☐ → **A**

Chef Pizza-Pants earned 4 pepperonis in each of 5 rounds, plus 21 bonus pepperonis. Then 5 pepperonis were lost. How many pepperonis are left?

Answer: ☐ → **N**

Scratch space:

CLUE 3 Word problems

> A delivery truck dropped a box of clues on the highway. We must compare the distances of the delivery trucks to catch up.

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

Someone scared the villain off with

S				S				S	
14	17	76	66	14	52	74	66	14	49

.

Chef Pizza-Pants found 10 slices yesterday and 4 more today. How many slices in all?

Answer: ☐ → **S**

Chef Pizza-Pants lined up 7 rows of 7 aprons. How many aprons in all?

Answer: ☐ → **H**

There were 91 slices. 17 were used up. How many slices are left?

Answer: ☐ → **L**

Chef Pizza-Pants found 3 dough balls yesterday and 49 more today. How many dough balls in all?

Answer: ☐ → **P**

There were 113 boxes. 37 were used up. How many boxes are left?

Answer: ☐ → **D**

There were 97 slices. 31 were used up. How many slices are left?

Answer: ☐ → **A**

Chef Pizza-Pants found 2 dough balls yesterday and 15 more today. How many dough balls in all?

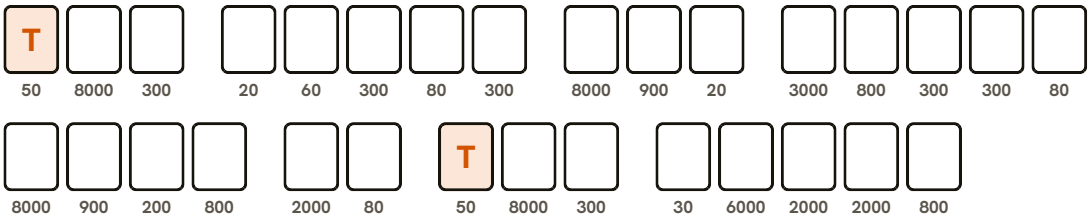
Answer: ☐ → **O**

Scratch space:

CLUE 4 Place value

> The digital oven timer is blinking with a weird code. We need to look closely at the digit in the tens place to unlock it.

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



What is the value of the 5 in 657? ☐ → **T**

What is the value of the 3 in 304? ☐ → **E**

What is the value of the 8 in 98,199? ☐ → **H**

What is the value of the 8 in 582? ☐ → **N**

What is the value of the 9 in 928? ☐ → **A**

What is the value of the 6 in 26,748? ☐ → **L**

What is the value of the 2 in 128? ☐ → **S**

What is the value of the 8 in 9,835? ☐ → **R**

What is the value of the 3 in 3,961? ☐ → **G**

What is the value of the 3 in 731? ☐ → **F**

What is the value of the 2 in 2,957? ☐ → **O**

What is the value of the 6 in 1,060? ☐ → **C**

What is the value of the 2 in 246? ☐ → **I**

Scratch space:

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

> The pizza crusts must be shared equally among the kitchen helpers. We have to divide them up to see who gets the extra piece.

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:

27 ÷ 3 = ☐	84 ÷ 7 = ☐	40 ÷ 8 = ☐	120 ÷ 12 = ☐	4 ÷ 2 = ☐
12 ÷ 2 = ☐	49 ÷ 7 = ☐	6 ÷ 2 = ☐	80 ÷ 10 = ☐	12 ÷ 12 = ☐
8 ÷ 2 = ☐				

Step 2 - cross out the sentence with each answer:

1. The villain sprays poisonous slime sauce, then spreads blue mold.
2. The villain sprays poisonous slime sauce, then splashes anchovy acid.
3. The villain tosses sleeping cheese, then dribbles sour pickle juice.
4. The villain throws a hot pepper blast, then dribbles sour pickle juice.
5. The villain throws a hot pepper blast, then sprinkles ghost pepper dust.
6. The villain blows mushroom fog, then dribbles sour pickle juice.
7. The villain sprays poisonous slime sauce, then pours mustard glaze.
8. The villain sprays poisonous slime sauce, then dribbles sour pickle juice.
9. The villain blows mushroom fog, then pours mustard glaze.
10. The villain blows mushroom fog, then sprinkles ghost pepper dust.
11. The villain blows mushroom fog, then spreads blue mold.
12. The villain tosses sleeping cheese, then spreads blue mold.

TEACHER / PARENT

Answer Key

The Case of the Poisonous Pizza

Culprit: Chef Tony

Mushroom Fog · Blue Mold · Right-Handed Cutter · Green Hair · Soda Splash

Trail: Start 21 → Clue 1 19 → Clue 2 11 → Clue 3 6 → Clue 4 4 → Clue 5 1

Clue 1 (Multiplication facts (1-12)): "THE VILLAIN DOES NOT USE SOUR PICKLE JUICE"

3 × 12 = 36 (T) · 12 × 12 = 144 (C) · 6 × 3 = 18 (K) · 3 × 10 = 30 (H) · 5 × 10 = 50 (V) · 7 × 1 = 7 (S) · 8 × 11 = 88 (R) · 3 × 1 = 3 (O) · 7 × 8 = 56 (P) · 10 × 12 = 120 (I) · 11 × 1 = 11 (D) · 9 × 9 = 81 (E) · 3 × 9 = 27 (J) · 7 × 11 = 77 (U) · 5 × 5 = 25 (N) · 11 × 11 = 121 (L) · 4 × 4 = 16 (A)

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

Chef Pizza-Pants collected 10 dough balls in the morning and 4 dough balls in the afternoon, then split them equally among 2 The Crust Crusaders. How many dough balls did each get? = 7 (R) · There were 122 aprons in all. 32 aprons were set aside. The rest were shared equally among 10 The Crust Crusaders. How many aprons did each get? = 9 (I) · There were 51 aprons in all. 3 aprons were set aside. The rest were shared equally among 3 The Crust Crusaders. How many aprons did each get? = 16 (H) · There were 196 boxes in all. 16 boxes were set aside. The rest were shared equally among 6 The Crust Crusaders. How many boxes did each get? = 30 (G) · There were 154 dough balls in all. 24 dough balls were set aside. The rest were shared equally among 10 The Crust Crusaders. How many dough balls did each get? = 13 (T) · There were 204 slices in all. 3 The Crust Crusaders used 39 slices each. The other 3 The Crust Crusaders shared the rest equally. How many slices did each of the other The Crust Crusaders get? = 29 (A) · Chef Pizza-Pants earned 4 pepperonis in each of 5 rounds, plus 21 bonus pepperonis. Then 5 pepperonis were lost. How many pepperonis are left? = 36 (N)

Clue 3 (Word problems): "SODA SPLASH"

Chef Pizza-Pants found 10 slices yesterday and 4 more today. How many slices in all? = 14 (S) · Chef Pizza-Pants lined up 7 rows of 7 aprons. How many aprons in all? = 49 (H) · There were 91 slices. 17 were used up. How many slices are left? = 74 (L) · Chef Pizza-Pants found 3 dough balls yesterday and 49 more today. How many dough balls in all? = 52 (P) · There were 113 boxes. 37 were used up. How many boxes are left? = 76 (D) · There were 97 slices. 31 were used up. How many slices are left? = 66 (A) · Chef Pizza-Pants found 2 dough balls yesterday and 15 more today. How many dough balls in all? = 17 (O)

Clue 4 (Place value): "THE SCENE HAS GREEN HAIR ON THE FLOOR"

What is the value of the 5 in 657? = 50 (T) · What is the value of the 3 in 304? = 300 (E) · What is the value of the 8 in 98,199? = 8000 (H) · What is the value of the 8 in 582? = 80 (N) · What is the value of the 9 in 928? = 900 (A) · What is the value of the 6 in 26,748? = 6000 (L) · What is the value of the 2 in 128? = 20 (S) · What is the value of the 8 in 9,835? = 800 (R) · What is the value of the 3 in 3,961? = 3000 (G) · What is the value of the 3 in 731? = 30 (F) · What is the value of the 2 in 2,957? = 2000 (O) · What is the value of the 6 in 1,060? = 60 (C) · What is the value of the 2 in 246? = 200 (I)

Clue 5 (Division facts (1-12)): surviving statement is box 11 → Chef Tony

27 ÷ 3 = 9 · 84 ÷ 7 = 12 · 40 ÷ 8 = 5 · 120 ÷ 12 = 10 · 4 ÷ 2 = 2 · 12 ÷ 2 = 6 · 49 ÷ 7 = 7 · 6 ÷ 2 = 3 · 80 ÷ 10 = 8 · 12 ÷ 12 = 1 · 8 ÷ 2 = 4