The Neon Nebula Heist

Grade 5 math · Fractions of a number, Rounding, Multiplication, Multi-step word problems · Reading level grades 5-6

Detective: _____ **Date:** _____

The Golden Joystick has been swiped from the Neon Nebula Arcade! A mysterious Glitch Bandit bypassed the security firewall, leaving a trail of corrupted high-score screens. As the leading Code Detective, you must scan the server logs, count the cyber-tokens, and pinpoint the culprit before they delete the system database!

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 Glitch Bandit is _____

Possible suspects

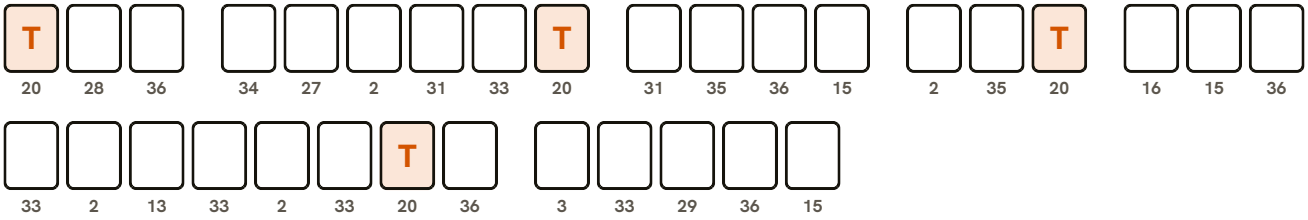
Cross off a row as each clue rules it out. The one left at the end is the culprit.

NAME	HACKING SPECIAL	CHEAT CODE	INPUT DEVICE	AVATAR GLOW COLOR	SYSTEM BUG
MacroMarcus	Frame Skip	Turbo Boost	Neon Headset	Blue Glow	Code Overload
AeroAlice	Lag Spike	Turbo Boost	Neon Visor	Blue Glow	Code Overload
CircuitChloe	Data Warp	Invincibility Shield	Neon Headset	Blue Glow	Magnet Interference
QuantumQuinn	Lag Spike	Gravity Flip	Neon Headset	Pink Glow	Magnet Interference
RetroRyan	Frame Skip	Gravity Flip	Neon Visor	Blue Glow	Magnet Interference
ApexAlex	Screen Shake	Turbo Boost	Neon Headset	Blue Glow	Code Overload
GlitchGavin	Lag Spike	Double Jump	Neon Headset	Blue Glow	Magnet Interference
GigaGaby	Data Warp	Infinite Lives	Neon Headset	Green Glow	Power Outage
ByteBen	Lag Spike	Turbo Boost	Neon Headset	Green Glow	Code Overload
ZenithZoe	Screen Shake	Gravity Flip	Neon Visor	Green Glow	Magnet Interference
DataDaniel	Screen Shake	Infinite Lives	Neon Visor	Green Glow	Code Overload
MatrixMax	Frame Skip	Turbo Boost	Neon Headset	Green Glow	Magnet Interference
HoloHannah	Screen Shake	Double Jump	Neon Headset	Blue Glow	Magnet Interference
CyberSam	Frame Skip	Gravity Flip	Neon Headset	Green Glow	Code Overload
LaserLaura	Pixel Burst	Turbo Boost	Neon Headset	Pink Glow	Code Overload
VectorVince	Lag Spike	Invincibility Shield	Neon Visor	Pink Glow	Power Outage
CosmicCole	Pixel Burst	Invincibility Shield	Neon Headset	Blue Glow	Power Outage
EchoEmma	Lag Spike	Gravity Flip	Neon Headset	Blue Glow	Power Outage
PixelPete	Lag Spike	Gravity Flip	Neon Visor	Blue Glow	Magnet Interference
PixelPaige	Screen Shake	Infinite Lives	Neon Headset	Blue Glow	Magnet Interference
VoltValerie	Data Warp	Turbo Boost	Neon Headset	Blue Glow	Magnet Interference

CLUE 1 Fractions of a number

To unlock the server logs, we must analyze the fractional bytes of the highest score.

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



3/6 of 40 = ☐ → **T**

2/8 of 64 = ☐ → **U**

3/4 of 20 = ☐ → **S**

3/6 of 56 = ☐ → **H**

2/6 of 93 = ☐ → **D**

2/4 of 68 = ☐ → **B**

1/10 of 20 = ☐ → **N**

2/10 of 180 = ☐ → **E**

4/8 of 26 = ☐ → **F**

6/10 of 55 = ☐ → **I**

1/5 of 175 = ☐ → **O**

1/4 of 116 = ☐ → **V**

3/6 of 54 = ☐ → **A**

1/5 of 15 = ☐ → **L**

Scratch space:

CLUE 2 Rounding

Our long-range radar scanner only shows rounded coordinate values for the escape pod.

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

T									T											T				
110	90	230	3700	1700	3700	2900	230	2000	110	70	4300	30	230	7000	3700	90	500	1300	290	1300	230	4300	1300	90	230	7000	50	3700	230	110

Round 113 to the nearest ten ☐ → T

Round 289 to the nearest ten ☐ → Y

Round 89 to the nearest ten ☐ → H

Round 31 to the nearest ten ☐ → R

Round 1,520 to the nearest thousand ☐ → C

Round 3,668 to the nearest hundred ☐ → S

Round 479 to the nearest hundred ☐ → I

Round 7,078 to the nearest thousand ☐ → A

Round 227 to the nearest ten ☐ → E

Round 1,662 to the nearest hundred ☐ → U

Round 2,948 to the nearest hundred ☐ → P

Round 72 to the nearest ten ☐ → W

Round 1,251 to the nearest hundred ☐ → N

Round 47 to the nearest ten ☐ → D

Round 4,310 to the nearest hundred ☐ → O

Scratch space:

CLUE 3 Multiplication facts (1-12)

> We found a storage locker containing equal rows of power cells that need to be tallied.

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

M																								
11	30	120	5	40	132	16	72	64	33	33	99	64	16	70	60	9	132	132	6	64	16	16	45	16	132	40	M
																											11

- 11 × 1 = ☐ → **M**
- 5 × 1 = ☐ → **N**
- 5 × 9 = ☐ → **Y**
- 8 × 8 = ☐ → **I**
- 10 × 12 = ☐ → **G**
- 12 × 11 = ☐ → **T**
- 3 × 2 = ☐ → **H**
- 11 × 3 = ☐ → **L**
- 11 × 9 = ☐ → **D**
- 12 × 6 = ☐ → **W**
- 10 × 7 = ☐ → **R**
- 10 × 3 = ☐ → **A**
- 8 × 5 = ☐ → **E**
- 1 × 9 = ☐ → **P**
- 6 × 10 = ☐ → **U**
- 4 × 4 = ☐ → **S**

Scratch space:

CLUE 4 Multi-step word problems

To crack the lock, calculate the remaining tokens after buying snacks and trading prizes.

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

A strand of | B | | | | | | | | hair turned up at the scene.

44	85	41	83	17	85	45	39

Pixel Pete filled 2 boxes with 5 floppy disks each, then found 34 more floppy disks. How many floppy disks are there in all? → B

Pixel Pete collected 6 arcade tickets in the morning and 76 arcade tickets in the afternoon, then split them equally among 2 The Code Crackers. How many arcade tickets did each get? → U

Pixel Pete filled 3 boxes with 9 floppy disks each, then found 56 more floppy disks. How many floppy disks are there in all? → E

There were 193 neon tokens in all. 4 The Code Crackers used 27 neon tokens each. The other 5 The Code Crackers shared the rest equally. How many neon tokens did each of the other The Code Crackers get? → G

Pixel Pete earned 6 neon tokens in each of 2 rounds, plus 36 bonus neon tokens. Then 3 neon tokens were lost. How many neon tokens are left? → O

Pixel Pete earned 2 arcade tickets in each of 2 rounds, plus 91 bonus arcade tickets. Then 10 arcade tickets were lost. How many arcade tickets are left? → L

There were 267 neon tokens in all. 33 neon tokens were set aside. The rest were shared equally among 6 The Code Crackers. How many neon tokens did each get? → W

Scratch space:

CLUE 5 Fractions of a number - the last clue

> The backup security database will boot once we solve for a fraction of the encryption keys.

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:

2/6 of 6 = ☐	4/10 of 15 = ☐	4/5 of 10 = ☐	1/6 of 6 = ☐
2/8 of 48 = ☐	1/4 of 28 = ☐	2/6 of 15 = ☐	1/4 of 16 = ☐
4/10 of 25 = ☐	1/10 of 30 = ☐	1/2 of 22 = ☐	

Step 2 - cross out the sentence with each answer:

1. The villain activates a massive lag spike, then survives the firewall defense with infinite lives.
2. The villain initiates a sudden data warp, then speeds past security with a turbo boost.
3. The villain triggers a bright pixel burst, then deflects the laser grids with an invincibility shield.
4. The villain activates a massive lag spike, then evades the drone guards with a gravity flip.
5. The villain forces a confusing frame skip, then evades the drone guards with a gravity flip.
6. The villain initiates a sudden data warp, then deflects the laser grids with an invincibility shield.
7. The villain initiates a sudden data warp, then evades the drone guards with a gravity flip.
8. The villain activates a massive lag spike, then escapes with a quick double jump.
9. The villain causes a wild screen shake, then escapes with a quick double jump.
10. The villain activates a massive lag spike, then speeds past security with a turbo boost.
11. The villain forces a confusing frame skip, then deflects the laser grids with an invincibility shield.
12. The villain causes a wild screen shake, then evades the drone guards with a gravity flip.

TEACHER / PARENT

Answer Key

The Neon Nebula Heist

Culprit: HoloHannah

Screen Shake · Double Jump · Neon Headset · Blue Glow · Magnet Interference

Trail: Start 21 → Clue 1 18 → Clue 2 13 → Clue 3 6 → Clue 4 4 → Clue 5 1

Clue 1 (Fractions of a number): "THE BANDIT DOES NOT USE INFINITE LIVES"

3/6 of 40 = 20 (T) · 2/8 of 64 = 16 (U) · 3/4 of 20 = 15 (S) · 3/6 of 56 = 28 (H) · 2/6 of 93 = 31 (D) · 2/4 of 68 = 34 (B) · 1/10 of 20 = 2 (N) · 2/10 of 180 = 36 (E) · 4/8 of 26 = 13 (F) · 6/10 of 55 = 33 (I) · 1/5 of 175 = 35 (O) · 1/4 of 116 = 29 (V) · 3/6 of 54 = 27 (A) · 1/5 of 15 = 3 (L)

Clue 2 (Rounding): "THE SUSPECT WORE A SHINY NEON HEADSET"

Round 113 to the nearest ten = 110 (T) · Round 289 to the nearest ten = 290 (Y) · Round 89 to the nearest ten = 90 (H) · Round 31 to the nearest ten = 30 (R) · Round 1,520 to the nearest thousand = 2000 (C) · Round 3,668 to the nearest hundred = 3700 (S) · Round 479 to the nearest hundred = 500 (I) · Round 7,078 to the nearest thousand = 7000 (A) · Round 227 to the nearest ten = 230 (E) · Round 1,662 to the nearest hundred = 1700 (U) · Round 2,948 to the nearest hundred = 2900 (P) · Round 72 to the nearest ten = 70 (W) · Round 1,251 to the nearest hundred = 1300 (N) · Round 47 to the nearest ten = 50 (D) · Round 4,310 to the nearest hundred = 4300 (O)

Clue 3 (Multiplication facts (1-12)): "MAGNETS WILL DISRUPT THIS SYSTEM"

11 × 1 = 11 (M) · 5 × 1 = 5 (N) · 5 × 9 = 45 (Y) · 8 × 8 = 64 (I) · 10 × 12 = 120 (G) · 12 × 11 = 132 (T) · 3 × 2 = 6 (H) · 11 × 3 = 33 (L) · 11 × 9 = 99 (D) · 12 × 6 = 72 (W) · 10 × 7 = 70 (R) · 10 × 3 = 30 (A) · 8 × 5 = 40 (E) · 1 × 9 = 9 (P) · 6 × 10 = 60 (U) · 4 × 4 = 16 (S)

Clue 4 (Multi-step word problems): "BLUE GLOW"

Pixel Pete filled 2 boxes with 5 floppy disks each, then found 34 more floppy disks. How many floppy disks are there in all? = 44 (B) · Pixel Pete collected 6 arcade tickets in the morning and 76 arcade tickets in the afternoon, then split them equally among 2 The Code Crackers. How many arcade tickets did each get? = 41 (U) · Pixel Pete filled 3 boxes with 9 floppy disks each, then found 56 more floppy disks. How many floppy disks are there in all? = 83 (E) · There were 193 neon tokens in all. 4 The Code Crackers used 27 neon tokens each. The other 5 The Code Crackers shared the rest equally. How many neon tokens did each of the other The Code Crackers get? = 17 (G) · Pixel Pete earned 6 neon tokens in each of 2 rounds, plus 36 bonus neon tokens. Then 3 neon tokens were lost. How many neon tokens are left? = 45 (O) · Pixel Pete earned 2 arcade tickets in each of 2 rounds, plus 91 bonus arcade tickets. Then 10 arcade tickets were lost. How many arcade tickets are left? = 85 (L) · There were 267 neon tokens in all. 33 neon tokens were set aside. The rest were shared equally among 6 The Code Crackers. How many neon tokens did each get? = 39 (W)

Clue 5 (Fractions of a number): surviving statement is box 9 → HoloHannah

2/6 of 6 = 2 · 4/10 of 15 = 6 · 4/5 of 10 = 8 · 1/6 of 6 = 1 · 2/8 of 48 = 12 · 1/4 of 28 = 7 · 2/6 of 15 = 5 · 1/4 of 16 = 4 · 4/10 of 25 = 10 · 1/10 of 30 = 3 · 1/2 of 22 = 11