



The Case of the Missing Nether Star

Grade 5 math · Multiplication, Multi-step word problems, Skip counting, Place value, Division · Reading level grades 3-4

Detective: _____ Date: _____

Someone snuck into the fortress vault and snatched the golden beacon star! The Chief Builder needs your detective skills to search the clues, solve the math puzzles, and unmask the thief before nightfall.

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 Griefing Rogue is _____

Possible suspects

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

NAME	MAIN TOOL	POTION EFFECT	DOMINANT HAND	HEADGEAR	SOFT SPOT
Sparky	Enchanted Bow	Jump Boost	Left Handed	Green Hood	Splash Water
Wilbur	Golden Axe	Night Vision	Right Handed	Green Hood	Milk Bucket
Crafty	Golden Axe	Speed Potion	Right Handed	Iron Helmet	Milk Bucket
Tubbo	Redstone Torch	Speed Potion	Right Handed	Leather Helmet	Splash Water
Alex	Enchanted Bow	Fire Resistance	Left Handed	Iron Helmet	Creeper Blast
MumboJumbo	Netherite Pickaxe	Fire Resistance	Left Handed	Green Hood	Splash Water
Bdouble100	Golden Axe	Invisibility	Left Handed	Leather Helmet	Creeper Blast
Skeppy	Redstone Torch	Invisibility	Right Handed	Leather Helmet	Splash Water
Philza	Enchanted Bow	Night Vision	Right Handed	Green Hood	Creeper Blast
Stampy	Netherite Pickaxe	Fire Resistance	Left Handed	Leather Helmet	Creeper Blast
Ranboo	Diamond Sword	Speed Potion	Right Handed	Iron Helmet	Creeper Blast
DanTDM	Redstone Torch	Jump Boost	Right Handed	Green Hood	Creeper Blast
Aphmau	Enchanted Bow	Fire Resistance	Right Handed	Iron Helmet	Creeper Blast
Blocky	Enchanted Bow	Fire Resistance	Right Handed	Green Hood	Creeper Blast
Pixel	Golden Axe	Night Vision	Right Handed	Iron Helmet	Creeper Blast
Grian	Netherite Pickaxe	Invisibility	Left Handed	Iron Helmet	Milk Bucket
Etho	Enchanted Bow	Night Vision	Left Handed	Iron Helmet	Creeper Blast
LDShadowLady	Redstone Torch	Invisibility	Left Handed	Green Hood	Creeper Blast
TommyInnit	Redstone Torch	Invisibility	Right Handed	Iron Helmet	Creeper Blast
Steve	Redstone Torch	Speed Potion	Right Handed	Iron Helmet	Creeper Blast
Technoblade	Enchanted Bow	Speed Potion	Right Handed	Green Hood	Creeper Blast

CLUE 1
Multiplication facts (1-12)

You count the rows of storage chests inside the vault to calculate the total missing loot.

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

T																T
81	11	63	3	30	88	88	2	30	22	14	20	63	84	22	20	81

													T	
28	84	63	30	22	3	30	84	30	56	30	88	30	81	7

$9 \times 9 = \square \rightarrow$ T	$3 \times 1 = \square \rightarrow$ V	$5 \times 6 = \square \rightarrow$ I	$7 \times 2 = \square \rightarrow$ D
$7 \times 4 = \square \rightarrow$ U	$2 \times 1 = \square \rightarrow$ A	$11 \times 8 = \square \rightarrow$ L	$7 \times 1 = \square \rightarrow$ Y
$11 \times 2 = \square \rightarrow$ N	$7 \times 12 = \square \rightarrow$ S	$8 \times 7 = \square \rightarrow$ B	
$1 \times 11 = \square \rightarrow$ H	$10 \times 2 = \square \rightarrow$ O	$9 \times 7 = \square \rightarrow$ E	

Scratch space:

CLUE 2

Multi-step word problems

To clear the heavy cobblestone blocking the exit, you figure out how many iron bars were mined and traded.

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 .

79 59 42 55 83 55 52 38

Master builder earned 8 redstone dust in each of 6 rounds, plus 33 bonus redstone dust. Then 2 redstone dust were lost. How many redstone dust are left?

Answer: → R

Master builder collected 74 emeralds in the morning and 2 emeralds in the afternoon, then split them equally among 2 mining guild. How many emeralds did each get?

Answer: → N

There were 176 oak logs in all. 4 mining guild used 5 oak logs each. The other 3 mining guild shared the rest equally. How many oak logs did each of the other mining guild get?

Answer: → A

Master builder earned 5 golden apples in each of 2 rounds, plus 62 bonus golden apples. Then 13 golden apples were lost. How many golden apples are left?

Answer: → I

There were 364 golden apples in all. 2 mining guild used 16 golden apples each. The other 4 mining guild shared the rest equally. How many golden apples did each of the other mining guild get?

Answer: → T

There were 328 diamond blocks in all. 34 diamond blocks were set aside. The rest were shared equally among 7 mining guild. How many diamond blocks did each get?

Answer: → G

Master builder filled 9 boxes with 3 oak logs each, then found 28 more oak logs. How many oak logs are there in all?

Answer: → H

Scratch space:

CLUE 3 Skip counting

You follow a shiny trail of redstone dust by hopping across glowing blocks in equal jumps.

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

T										T									
26	22	90	42	110	90	100	80	24	24	26	110	25	25	90	36	70	50	80	
33	39	90	90	25	90	39	70	16	80	24	26								

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

Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, 60, 70, __, 90, 100 → **A**

Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, 60, 70, 80, 90, 100, __, 120, 130 → **O**

Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, 60, 70, 80, 90, __, 110, 120 → **W**

Skip-count by 5s. Fill the blank: 5, 10, 15, 20, 25, 30, 35, 40, 45, __, 55, 60 → **Y**

Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, 60, 70, 80, __, 100, 110 → **E**

Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, 21, 24, 27, 30, 33, 36, __, 42, 45 → **R**

Skip-count by 5s. Fill the blank: 5, 10, 15, 20, __, 30, 35 → **P**

Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, 21, __, 27, 30 → **S**

Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, 60, __, 80, 90 → **B**

Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, 21, 24, 27, 30, 33, 36, 39, __, 45, 48 → **F**

Skip-count by 2s. Fill the blank: 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, __, 24, 26 → **H**

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

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

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

Scratch space:

CLUE 4 Place value

The keypad on the redstone door shows a number code with hundreds, tens, and ones.

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

A													A					
30	100	9000	8000	200	100	20	60	5000	10	60	500	7000	700	8000	30	500	700	20

	A											
40	30	7000	200	100	500	20	60	1000	5000	200	700	900

What is the value of the 3 in 88,135?

→

A

What is the value of the 4 in 871,549?

→

W

What is the value of the 1 in 797,199?

→

N

What is the value of the 7 in 827,218?

→

S

What is the value of the 9 in 59,753?

→

I

What is the value of the 7 in 353,793?

→

C

What is the value of the 8 in 18,240?

→

R

What is the value of the 2 in 740,258?

→

O

What is the value of the 1 in 42,719?

→

M

What is the value of the 1 in 41,399?

→

B

What is the value of the 5 in 85,092?

→

L

What is the value of the 9 in 603,906?

→

K

What is the value of the 2 in 110,524?

→

H

What is the value of the 6 in 977,762?

→

E

What is the value of the 5 in 42,584?

→

T

Scratch space:

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

You divide the recovered emeralds equally among the town guards to get their final clue.

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:

$36 \div 6 = \boxed{}$

$84 \div 7 = \boxed{}$

$25 \div 5 = \boxed{}$

$48 \div 6 = \boxed{}$

$8 \div 2 = \boxed{}$

$11 \div 11 = \boxed{}$

$2 \div 1 = \boxed{}$

$50 \div 5 = \boxed{}$

$15 \div 5 = \boxed{}$

$81 \div 9 = \boxed{}$

$28 \div 4 = \boxed{}$

Step 2 - cross out the sentence with each answer:

1. The villain dug with a netherite pickaxe, then glitched with invisibility.
2. The villain shot an enchanted bow, then leaped with jump boost.
3. The villain lit a redstone torch, then leaped with jump boost.
4. The villain chopped with a golden axe, then drank a speed potion.
5. The villain shot an enchanted bow, then used fire resistance.
6. The villain chopped with a golden axe, then gained night vision.
7. The villain dug with a netherite pickaxe, then drank a speed potion.
8. The villain chopped with a golden axe, then glitched with invisibility.
9. The villain lit a redstone torch, then used fire resistance.
10. The villain swung a diamond sword, then leaped with jump boost.
11. The villain swung a diamond sword, then drank a speed potion.
12. The villain lit a redstone torch, then drank a speed potion.

Answer Key

The Case of the Missing Nether Star

Culprit: Ranboo

Diamond Sword · Speed Potion · Right Handed · Iron Helmet · Creeper Blast

Trail: Start 21 → Clue 1 16 → Clue 2 11 → Clue 3 8 → Clue 4 4 → Clue 5 1

Clue 1 (Multiplication facts (1-12)): "THE VILLAIN DOES NOT USE INVISIBILITY"

$9 \times 9 = 81$ (T) · $3 \times 1 = 3$ (V) · $5 \times 6 = 30$ (I) · $7 \times 2 = 14$ (D) · $7 \times 4 = 28$ (U) · $2 \times 1 = 2$ (A) · $11 \times 8 = 88$ (L) · $7 \times 1 = 7$ (Y) · $11 \times 2 = 22$ (N) · $7 \times 12 = 84$ (S) · $8 \times 7 = 56$ (B) · $1 \times 11 = 11$ (H) · $10 \times 2 = 20$ (O) · $9 \times 7 = 63$ (E)

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

Master builder earned 8 redstone dust in each of 6 rounds, plus 33 bonus redstone dust. Then 2 redstone dust were lost. How many redstone dust are left? = 79 (R) · Master builder collected 74 emeralds in the morning and 2 emeralds in the afternoon, then split them equally among 2 mining guild. How many emeralds did each get? = 38 (N) · There were 176 oak logs in all. 4 mining guild used 5 oak logs each. The other 3 mining guild shared the rest equally. How many oak logs did each of the other mining guild get? = 52 (A) · Master builder earned 5 golden apples in each of 2 rounds, plus 62 bonus golden apples. Then 13 golden apples were lost. How many golden apples are left? = 59 (I) · There were 364 golden apples in all. 2 mining guild used 16 golden apples each. The other 4 mining guild shared the rest equally. How many golden apples did each of the other mining guild get? = 83 (T) · There were 328 diamond blocks in all. 34 diamond blocks were set aside. The rest were shared equally among 7 mining guild. How many diamond blocks did each get? = 42 (G) · Master builder filled 9 boxes with 3 oak logs each, then found 28 more oak logs. How many oak logs are there in all? = 55 (H)

Clue 3 (Skip counting): "THE FOE WAS STOPPED BY A CREEPER BLAST"

Skip-count by 2s. Fill the blank: 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, __, 28, 30 = 26 (T) · Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, 60, 70, __, 90, 100 = 80 (A) · Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, 60, 70, 80, 90, 100, __, 120, 130 = 110 (O) · Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, 60, 70, 80, 90, __, 110, 120 = 100 (W) · Skip-count by 5s. Fill the blank: 5, 10, 15, 20, 25, 30, 35, 40, 45, __, 55, 60 = 50 (Y) · Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, 60, 70, 80, __, 100, 110 = 90 (E) · Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, 21, 24, 27, 30, 33, 36, __, 42, 45 = 39 (R) · Skip-count by 5s. Fill the blank: 5, 10, 15, 20, __, 30, 35 = 25 (P) · Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, 21, __, 27, 30 = 24 (S) · Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, 60, __, 80, 90 = 70 (B) · Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, 21, 24, 27, 30, 33, 36, 39, __, 45, 48 = 42 (F) · Skip-count by 2s. Fill the blank: 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, __, 24, 26 = 22 (H) · Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, 21, 24, 27, 30, __, 36, 39 = 33 (C) · Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, 21, 24, 27, 30, 33, __, 39, 42 = 36 (D) · Skip-count by 2s. Fill the blank: 2, 4, 6, 8, 10, 12, 14, __, 18, 20 = 16 (L)

Clue 4 (Place value): "AN IRON HELMET SCRATCH WAS ON THE BLOCK"

What is the value of the 3 in 88,135? = 30 (A) · What is the value of the 4 in 871,549? = 40 (W) · What is the value of the 1 in 797,199? = 100 (N) · What is the value of the 7 in 827,218? = 7000 (S) · What is the value of the 9 in 59,753? = 9000 (I) · What is the value of the 7 in 353,793? = 700 (C) · What is the value of the 8 in 18,240? = 8000 (R) · What is the value of the 2 in 740,258? = 200 (O) · What is the value of the 1 in 42,719? = 10 (M) · What is the value of the 1 in 41,399? = 1000 (B) · What is the value of the 5 in 85,092? = 5000 (L) · What is the value of the 9 in 603,906? = 900 (K) · What is the value of the 2 in 110,524? = 20 (H) · What is the value of the 6 in 977,762? = 60 (E) · What is the value of the 5 in 42,584? = 500 (T)

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

$36 \div 6 = 6$ · $84 \div 7 = 12$ · $25 \div 5 = 5$ · $48 \div 6 = 8$ · $8 \div 2 = 4$ · $11 \div 11 = 1$ · $2 \div 1 = 2$ · $50 \div 5 = 10$ · $15 \div 5 = 3$ · $81 \div 9 = 9$ · $28 \div 4 = 7$