



The Redstone Ridge Griefing

Grade 6 math · Fractions of a number, Percentages, Exponents, Order of operations · Reading level grades 5-6

Detective: _____ Date: _____

A mysterious rogue has hacked into the Blocky Hills SMP, stealing the legendary Dragon Egg and locking the spawn point! The Server Admin is panicking as redstone traps trigger across the map. We must use our block-building wits and math skills to track down the griefing master and restore order to the server before everything is deleted!

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 Griefing Master is _____

Possible suspects

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

NAME	CHEAT MOD	HELD ITEM	SWINGING HAND	HELMET STYLE	COUNTER ITEM
Tubbo	speed hacking	splash potion	left handed swinging	golden helmet	milk bucket
Dream	fire resistance	lava bucket	left handed swinging	diamond helmet	glowstone dust
Grian	fire resistance	splash potion	right handed swinging	golden helmet	glowstone dust
PopularMMOs	instamine tool	ender pearl	right handed swinging	golden helmet	glowstone dust
DanTDM	tnt blasting	splash potion	left handed swinging	golden helmet	splash water bottle
Mumbo	speed hacking	totem of undying	right handed swinging	golden helmet	milk bucket
Preston	tnt blasting	ender pearl	left handed swinging	netherite helmet	glowstone dust
WilburSoot	speed hacking	enchanted golden apple	left handed swinging	diamond helmet	splash water bottle
Iskall	tnt blasting	lava bucket	right handed swinging	diamond helmet	glowstone dust
Aphmau	speed hacking	enchanted golden apple	right handed swinging	golden helmet	glowstone dust
Stampy	tnt blasting	enchanted golden apple	right handed swinging	netherite helmet	milk bucket
LDShadowLady	fire resistance	lava bucket	left handed swinging	diamond helmet	milk bucket
Philza	tnt blasting	ender pearl	left handed swinging	diamond helmet	glowstone dust
Technoblade	instamine tool	lava bucket	right handed swinging	golden helmet	milk bucket
Skeppy	instamine tool	splash potion	left handed swinging	diamond helmet	glowstone dust
Alex	speed hacking	totem of undying	left handed swinging	netherite helmet	glowstone dust
Ranboo	elytra flight	totem of undying	right handed swinging	golden helmet	splash water bottle
Unspeakable	instamine tool	ender pearl	left handed swinging	diamond helmet	glowstone dust
CaptainSparklez	fire resistance	lava bucket	left handed swinging	diamond helmet	splash water bottle
FitMC	elytra flight	enchanted golden apple	left handed swinging	diamond helmet	glowstone dust
AntVenom	elytra flight	lava bucket	left handed swinging	diamond helmet	milk bucket

Fractions of a number

To crack the villain's identity, we must first sort through the messy chests at the base. Only a fraction of the remaining iron blocks are real.

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

A number line from 0 to 100 with two rows of boxes. The top row has boxes at 37, 30, 35, 6, 17, 2, 2, 29, 17, 9, 25, 40, 35, 10, 9, 40, and 37. The bottom row has boxes at 30, 40, 2, 25, 29, 19, 40, 2, 25, 35, 9, 29, 20, 20, 2, and 35. The boxes at 37 are highlighted in orange.

$$\frac{1}{4} \text{ of } 148 = \boxed{} \rightarrow \boxed{\text{T}}$$

$3/8$ of $16 = \boxed{} \rightarrow \boxed{\mathbf{V}}$

$$2/10 \text{ of } 175 = \boxed{} \rightarrow \mathbf{E}$$

$\frac{1}{3}$ of 75 = $\rightarrow$ **D**

$\frac{1}{4}$ of 8 = $\rightarrow$ **L**

$$\frac{1}{5} \text{ of } 85 = \boxed{} \rightarrow \boxed{\text{I}}$$

$$\frac{4}{8} \text{ of } 60 = \boxed{} \rightarrow \boxed{\text{H}}$$

$$1/10 \text{ of } 100 = \boxed{} \rightarrow \boxed{\text{S}}$$

$4/5$ of $50 = \boxed{} \rightarrow \boxed{0}$

$$1/8 \text{ of } 72 = \boxed{} \rightarrow \boxed{\mathbf{N}}$$

$$2/8 \text{ of } 76 = \boxed{} \rightarrow \text{G}$$

$$4/8 \text{ of } 40 = \boxed{} \rightarrow \boxed{\text{P}}$$

$4/8$ of $58 = \boxed{} \rightarrow \boxed{\text{A}}$

Scratch space:

CLUE 2

A damaged shield was left at the crime scene. By calculating the exact percentage of durability left on it, we can unlock the server log.

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

Diagram illustrating the arrangement of boxes and numbers:

Row 1: [T] [28] [44] [33] [7] [35] [39] [39] [18] [35] [14] [26] [31] [35] [14] [30] [26] [31] [35] [T] [28] [44]

Row 2: [T] [28] [44] [33] [39] [33] [16] [T] [28] [44] [18] [14] [9]

5% of 560 = → **T**

50% of 28 = → **N**

50% of 32 = → **F**

20% of 150 = → **G**

10% of 310 = → **W**

25% of 176 = → **H**

25% of 104 = → **S**

75% of 24 = → **A**

20% of 175 = →

75% of 12 = → **D**

10% of 70 = → ☒ V

25% of 132 = → **E**

25% of 156 = → **L**

Scratch space:

CLUE 3 Exponents

The culprit locked a chest using a combination based on block volumes. Use exponents to find the total cubic units of the redstone vault.

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

G																
243	25	289	27	81	361	289	64	400	32	225	81	361	27	16	25	25

196	25	16	64	32	361	125	16	81	8	216	4	128	361	400	216

$3^5 = \square \rightarrow \mathbf{G}$	$6^3 = \square \rightarrow \mathbf{R}$	$20^2 = \square \rightarrow \mathbf{E}$	$2^5 = \square \rightarrow \mathbf{D}$
$15^2 = \square \rightarrow \mathbf{U}$	$5^3 = \square \rightarrow \mathbf{H}$	$17^2 = \square \rightarrow \mathbf{O}$	$3^4 = \square \rightarrow \mathbf{S}$
$2^2 = \square \rightarrow \mathbf{A}$	$14^2 = \square \rightarrow \mathbf{B}$	$2^3 = \square \rightarrow \mathbf{C}$	$2^7 = \square \rightarrow \mathbf{F}$
$5^2 = \square \rightarrow \mathbf{L}$	$2^6 = \square \rightarrow \mathbf{N}$	$19^2 = \square \rightarrow \mathbf{T}$	$3^3 = \square \rightarrow \mathbf{W}$
$2^4 = \square \rightarrow \mathbf{I}$			

Scratch space:

CLUE 4
Order of operations

A redstone circuit needs the correct power level to activate. Solve this order of operations puzzle to find the exact signal strength.

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

T																			
64	24	41	38	58	31	31	21	58	59	67	41	21	29	80	30	31	13	41	
78	58	21	44	22	59	78	24	41	31	44	41	64							

$7 \times 10 - 6 = \square \rightarrow \boxed{\text{T}}$

$37 + 6 \times 5 = \square \rightarrow \boxed{\text{W}}$

$10 \times 6 - 30 = \square \rightarrow \boxed{\text{B}}$

$1 + 3 \times 7 = \square \rightarrow \boxed{\text{O}}$

$10 \times 5 - 21 = \square \rightarrow \boxed{\text{R}}$

$62 + 9 \times 2 = \square \rightarrow \boxed{\text{S}}$

$23 + 9 \times 4 = \square \rightarrow \boxed{\text{N}}$

$4 \times 10 - 2 = \square \rightarrow \boxed{\text{V}}$

$7 \times 6 - 29 = \square \rightarrow \boxed{\text{U}}$

$7 \times 7 - 18 = \square \rightarrow \boxed{\text{L}}$

$40 + 9 \times 2 = \square \rightarrow \boxed{\text{I}}$

$9 \times 6 - 30 = \square \rightarrow \boxed{\text{H}}$

$11 \times 3 - 12 = \square \rightarrow \boxed{\text{A}}$

$38 + 8 \times 5 = \square \rightarrow \boxed{\text{D}}$

$17 + 3 \times 9 = \square \rightarrow \boxed{\text{M}}$

$21 + 4 \times 5 = \square \rightarrow \boxed{\text{E}}$

Scratch space:

CLUE 5**Fractions of a number - the last clue**

The server files are corrupted. To restore them, we must divide a stack of emeralds and find the value of a small fraction of the pile.

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:

$2/6 \text{ of } 24 = \boxed{}$

$1/4 \text{ of } 44 = \boxed{}$

$1/3 \text{ of } 36 = \boxed{}$

$4/5 \text{ of } 5 = \boxed{}$

$1/2 \text{ of } 14 = \boxed{}$

$1/3 \text{ of } 15 = \boxed{}$

$1/10 \text{ of } 100 = \boxed{}$

$4/6 \text{ of } 3 = \boxed{}$

$5/10 \text{ of } 18 = \boxed{}$

$3/4 \text{ of } 8 = \boxed{}$

$1/8 \text{ of } 24 = \boxed{}$

Step 2 - cross out the sentence with each answer:

1. The villain tunnels straight through solid stone, then throws down a foggy splash potion.
2. The villain tunnels straight through solid stone, then eats a glowing enchanted golden apple.
3. The villain blasts a giant crater with tnt, then eats a glowing enchanted golden apple.
4. The villain blasts a giant crater with tnt, then throws down a foggy splash potion.
5. The villain zooms past the security barrier, then teleports away using an ender pearl.
6. The villain zooms past the security barrier, then eats a glowing enchanted golden apple.
7. The villain swims straight through deep lava, then teleports away using an ender pearl.
8. The villain swims straight through deep lava, then spills a burning hot lava bucket.
9. The villain zooms past the security barrier, then escapes danger with a glowing totem.
10. The villain tunnels straight through solid stone, then spills a burning hot lava bucket.
11. The villain blasts a giant crater with tnt, then teleports away using an ender pearl.
12. The villain tunnels straight through solid stone, then teleports away using an ender pearl.

Answer Key

The Redstone Ridge Griefing

Culprit: Skeppy

instamine tool · splash potion · left handed swinging · diamond helmet · glowstone dust

Trail: Start 21 → Clue 1 17 → Clue 2 11 → Clue 3 6 → Clue 4 4 → Clue 5 1

Clue 1 (Fractions of a number): "THE VILLAIN DOES NOT HOLD A GOLDEN APPLE"

$\frac{1}{4}$ of 148 = 37 (T) · $\frac{3}{8}$ of 16 = 6 (V) · $\frac{2}{10}$ of 175 = 35 (E) · $\frac{1}{3}$ of 75 = 25 (D) · $\frac{1}{4}$ of 8 = 2 (L) · $\frac{1}{5}$ of 85 = 17 (I) · $\frac{4}{8}$ of 60 = 30 (H) · $\frac{1}{10}$ of 100 = 10 (S) · $\frac{4}{5}$ of 50 = 40 (O) · $\frac{1}{8}$ of 72 = 9 (N) · $\frac{2}{8}$ of 76 = 19 (G) · $\frac{4}{8}$ of 40 = 20 (P) · $\frac{4}{8}$ of 58 = 29 (A)

Clue 2 (Percentages): "THE VILLAIN SWINGS WITH THE LEFT HAND"

5% of 560 = 28 (T) · 50% of 28 = 14 (N) · 50% of 32 = 16 (F) · 20% of 150 = 30 (G) · 10% of 310 = 31 (W) · 25% of 176 = 44 (H) · 25% of 104 = 26 (S) · 75% of 24 = 18 (A) · 20% of 175 = 35 (I) · 75% of 12 = 9 (D) · 10% of 70 = 7 (V) · 25% of 132 = 33 (E) · 25% of 156 = 39 (L)

Clue 3 (Exponents): "GLOWSTONE DUST WILL BLIND THIS CRAFTER"

$3^5 = 243$ (G) · $6^3 = 216$ (R) · $20^2 = 400$ (E) · $2^5 = 32$ (D) · $15^2 = 225$ (U) · $5^3 = 125$ (H) · $17^2 = 289$ (O) · $3^4 = 81$ (S) · $2^2 = 4$ (A) · $14^2 = 196$ (B) · $2^3 = 8$ (C) · $2^7 = 128$ (F) · $5^2 = 25$ (L) · $2^6 = 64$ (N) · $19^2 = 361$ (T) · $3^3 = 27$ (W) · $2^4 = 16$ (I)

Clue 4 (Order of operations): "THE VILLAIN WEARS BLUE DIAMOND HELMET"

$7 \times 10 - 6 = 64$ (T) · $37 + 6 \times 5 = 67$ (W) · $10 \times 6 - 30 = 30$ (B) · $1 + 3 \times 7 = 22$ (O) · $10 \times 5 - 21 = 29$ (R) · $62 + 9 \times 2 = 80$ (S) · $23 + 9 \times 4 = 59$ (N) · $4 \times 10 - 2 = 38$ (V) · $7 \times 6 - 29 = 13$ (U) · $7 \times 7 - 18 = 31$ (L) · $40 + 9 \times 2 = 58$ (I) · $9 \times 6 - 30 = 24$ (H) · $11 \times 3 - 12 = 21$ (A) · $38 + 8 \times 5 = 78$ (D) · $17 + 3 \times 9 = 44$ (M) · $21 + 4 \times 5 = 41$ (E)

Clue 5 (Fractions of a number): surviving statement is box 1 → Skeppy

$\frac{2}{6}$ of 24 = 8 · $\frac{1}{4}$ of 44 = 11 · $\frac{1}{3}$ of 36 = 12 · $\frac{4}{5}$ of 5 = 4 · $\frac{1}{2}$ of 14 = 7 · $\frac{1}{3}$ of 15 = 5 · $\frac{1}{10}$ of 100 = 10 · $\frac{4}{6}$ of 3 = 2 · $\frac{5}{10}$ of 18 = 9 · $\frac{3}{4}$ of 8 = 6 · $\frac{1}{8}$ of 24 = 3