The Mystery of Overworld Castle

Grade 6 math · Fractions of a number, Rounding, Bar models, Percentages · Reading level grades 5-6

Detective: _____ **Date:** _____

Someone griefed the main square of Overworld Castle and stole the admin chest! Solve the math clues to figure out who raided the vault.

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 Griefer is _____

Possible suspects

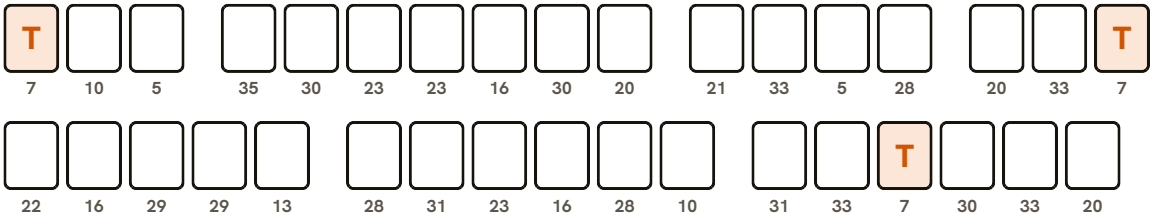
Cross off a row as each clue rules it out. The one left at the end is the culprit.

NAME	PRIMARY TOOL	SPECIAL GEAR	DOMINANT HAND	HEADGEAR	VULNERABILITY
Sparklez	Elytra Wings	Splash Potion	Right Handed	Gold Helmet	Bell Ring
Mumbo	Redstone Dust	Ender Pearl	Right Handed	Iron Helmet	Bell Ring
Jack	Elytra Wings	Ender Pearl	Left Handed	Iron Helmet	Splash Water
Squid	Golden Apple	Totem Of Undying	Left Handed	Diamond Helmet	Splash Water
Stampy	Golden Apple	Firework Rocket	Left Handed	Diamond Helmet	Splash Water
Steve	Golden Apple	Totem Of Undying	Left Handed	Gold Helmet	Splash Water
Noch	Golden Apple	Firework Rocket	Right Handed	Iron Helmet	Sweet Berries
Ranboo	Netherite Sword	Lava Bucket	Right Handed	Diamond Helmet	Sweet Berries
Techno	Golden Apple	Totem Of Undying	Left Handed	Iron Helmet	Splash Water
Aphmau	Diamond Pickaxe	Totem Of Undying	Left Handed	Gold Helmet	Bell Ring
Hermit	Netherite Sword	Ender Pearl	Left Handed	Iron Helmet	Sweet Berries
Joel	Golden Apple	Totem Of Undying	Right Handed	Iron Helmet	Splash Water
Sven	Diamond Pickaxe	Firework Rocket	Left Handed	Iron Helmet	Splash Water
Jeb	Redstone Dust	Splash Potion	Left Handed	Iron Helmet	Splash Water
Lizzie	Golden Apple	Ender Pearl	Left Handed	Iron Helmet	Splash Water
Captain	Netherite Sword	Lava Bucket	Left Handed	Iron Helmet	Bell Ring
Alex	Golden Apple	Splash Potion	Left Handed	Gold Helmet	Splash Water
Dan	Redstone Dust	Ender Pearl	Left Handed	Diamond Helmet	Bell Ring
Phil	Golden Apple	Splash Potion	Left Handed	Iron Helmet	Splash Water
Corey	Diamond Pickaxe	Ender Pearl	Left Handed	Iron Helmet	Bell Ring
Tommy	Elytra Wings	Totem Of Undying	Right Handed	Gold Helmet	Splash Water

CLUE 1 Fractions of a number

> To trace where the griefing began, you check the server log fractions.

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



7/10 of 10 = ☐ → **T**

4/6 of 45 = ☐ → **I**

7/8 of 24 = ☐ → **D**

5/10 of 70 = ☐ → **V**

3/6 of 46 = ☐ → **L**

2/3 of 42 = ☐ → **S**

2/4 of 62 = ☐ → **P**

1/2 of 26 = ☐ → **Y**

2/10 of 100 = ☐ → **N**

2/10 of 110 = ☐ → **C**

3/6 of 10 = ☐ → **E**

1/3 of 30 = ☐ → **H**

1/2 of 58 = ☐ → **R**

5/10 of 32 = ☐ → **A**

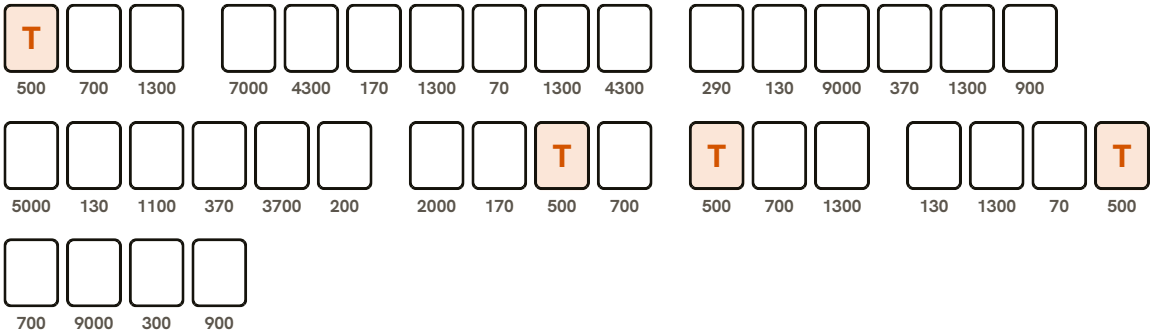
6/8 of 44 = ☐ → **O**

Scratch space:

CLUE 2 Rounding

The server radar only gives rounded player distances across the biomes.

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



Round 529 to the nearest hundred ☐ → **T**

Round 948 to the nearest hundred ☐ → **D**

Round 166 to the nearest ten ☐ → **I**

Round 67 to the nearest ten ☐ → **F**

Round 8,680 to the nearest thousand ☐ → **A**

Round 134 to the nearest ten ☐ → **L**

Round 7,101 to the nearest thousand ☐ → **G**

Round 5,029 to the nearest thousand ☐ → **B**

Round 271 to the nearest hundred ☐ → **N**

Round 1,142 to the nearest hundred ☐ → **O**

Round 4,323 to the nearest hundred ☐ → **R**

Round 1,279 to the nearest hundred ☐ → **E**

Round 200 to the nearest hundred ☐ → **S**

Round 3,706 to the nearest hundred ☐ → **K**

Round 691 to the nearest hundred ☐ → **H**

Round 2,249 to the nearest thousand ☐ → **W**

Round 374 to the nearest ten ☐ → **C**

Round 288 to the nearest ten ☐ → **P**

Scratch space:

CLUE 3 Bar model word problems

You compare block counts side by side using a block grid model.

Draw a bar model to solve each word problem, then write its letter in the boxes to fill in the missing word.

Someone scared the villain off with

S				S					E	R
39	55	132	141	39	83	128	141	53		

.

There were 78 lapis lazuli in all. 39 lapis lazuli were used. How many lapis lazuli are left?

draw a bar model

Answer: ☐ → S

Builder has 212 redstone lamps, packed 4 to a bag. How many bags can be filled?

draw a bar model

Answer: ☐ → T

The red team has 142 emerald ores and the blue team has 1 emerald ores. How many more emerald ores does the red team have?

draw a bar model

Answer: ☐ → A

Builder used 5/6 of the oak planks on the first day. The other 22 oak planks were used the next day. How many oak planks were there in all?

draw a bar model

Answer: ☐ → L

Builder has 165 lapis lazuli, packed 3 to a bag. How many bags can be filled?

draw a bar model

Answer: ☐ → P

One group collected 111 lapis lazuli and another group collected 17 lapis lazuli. How many lapis lazuli in all?

draw a bar model

Answer: ☐ → W

Builder shares 166 oak planks equally among 2 teams. How many oak planks does each team get?

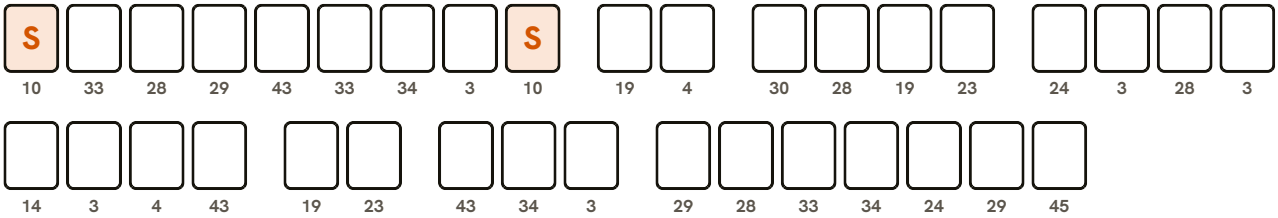
draw a bar model

Answer: ☐ → H

CLUE 4 Percentages

The spawn gate system shows energy percentages left in each sector.

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



40% of 25 = ☐ → S

25% of 112 = ☐ → R

75% of 40 = ☐ → I

20% of 95 = ☐ → O

75% of 44 = ☐ → C

5% of 900 = ☐ → Y

60% of 5 = ☐ → E

20% of 20 = ☐ → F

25% of 172 = ☐ → T

50% of 48 = ☐ → W

5% of 680 = ☐ → H

50% of 58 = ☐ → A

10% of 230 = ☐ → N

25% of 56 = ☐ → L

Scratch space:

CLUE 5 Fractions of a number - the last clue

You calculate fractions of collected emeralds to narrow the search.

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:

1/3 of 30 = ☐	8/10 of 15 = ☐	2/4 of 22 = ☐	3/10 of 10 = ☐
2/8 of 8 = ☐	8/10 of 10 = ☐	3/4 of 8 = ☐	2/10 of 25 = ☐
1/2 of 18 = ☐	2/10 of 5 = ☐	4/10 of 10 = ☐	

Step 2 - cross out the sentence with each answer:

1. The villain chugged a brew of regeneration, then shattered a splash potion on the floor.
2. The villain glided down from the high tower, then shattered a splash potion on the floor.
3. The villain glided down from the high tower, then dumped a lava bucket across the bridge.
4. The villain wired redstone to trigger TNT, then clutched a totem of undying.
5. The villain swung a blade at the obsidian gate, then clutched a totem of undying.
6. The villain wired redstone to trigger TNT, then tossed an ender pearl to escape.
7. The villain dug under the fortress wall, then ignited a firework rocket for speed.
8. The villain wired redstone to trigger TNT, then shattered a splash potion on the floor.
9. The villain dug under the fortress wall, then shattered a splash potion on the floor.
10. The villain chugged a brew of regeneration, then tossed an ender pearl to escape.
11. The villain chugged a brew of regeneration, then clutched a totem of undying.
12. The villain glided down from the high tower, then tossed an ender pearl to escape.

TEACHER / PARENT

Answer Key

The Mystery of Overworld Castle

Culprit: Sven

Diamond Pickaxe · Firework Rocket · Left Handed · Iron Helmet · Splash Water

Trail: Start 21 → Clue 1 17 → Clue 2 12 → Clue 3 7 → Clue 4 4 → Clue 5 1

Clue 1 (Fractions of a number): "THE VILLAIN DOES NOT CARRY SPLASH POTION"

7/10 of 10 = 7 (T) · 4/6 of 45 = 30 (I) · 7/8 of 24 = 21 (D) · 5/10 of 70 = 35 (V) · 3/6 of 46 = 23 (L) · 2/3 of 42 = 28 (S) · 2/4 of 62 = 31 (P) · 1/2 of 26 = 13 (Y) · 2/10 of 100 = 20 (N) · 2/10 of 110 = 22 (C) · 3/6 of 10 = 5 (E) · 1/3 of 30 = 10 (H) · 1/2 of 58 = 29 (R) · 5/10 of 32 = 16 (A) · 6/8 of 44 = 33 (O)

Clue 2 (Rounding): "THE GRIEFER PLACED BLOCKS WITH THE LEFT HAND"

Round 529 to the nearest hundred = 500 (T) · Round 948 to the nearest hundred = 900 (D) · Round 166 to the nearest ten = 170 (I) · Round 67 to the nearest ten = 70 (F) · Round 8,680 to the nearest thousand = 9000 (A) · Round 134 to the nearest ten = 130 (L) · Round 7,101 to the nearest thousand = 7000 (G) · Round 5,029 to the nearest thousand = 5000 (B) · Round 271 to the nearest hundred = 300 (N) · Round 1,142 to the nearest hundred = 1100 (O) · Round 4,323 to the nearest hundred = 4300 (R) · Round 1,279 to the nearest hundred = 1300 (E) · Round 200 to the nearest hundred = 200 (S) · Round 3,706 to the nearest hundred = 3700 (K) · Round 691 to the nearest hundred = 700 (H) · Round 2,249 to the nearest thousand = 2000 (W) · Round 374 to the nearest ten = 370 (C) · Round 288 to the nearest ten = 290 (P)

Clue 3 (Bar model word problems): "SPLASH WATER"

There were 78 lapis lazuli in all. 39 lapis lazuli were used. How many lapis lazuli are left? = 39 (S) · Builder has 212 redstone lamps, packed 4 to a bag. How many bags can be filled? = 53 (T) · The red team has 142 emerald ores and the blue team has 1 emerald ores. How many more emerald ores does the red team have? = 141 (A) · Builder used 5/6 of the oak planks on the first day. The other 22 oak planks were used the next day. How many oak planks were there in all? = 132 (L) · Builder has 165 lapis lazuli, packed 3 to a bag. How many bags can be filled? = 55 (P) · One group collected 111 lapis lazuli and another group collected 17 lapis lazuli. How many lapis lazuli in all? = 128 (W) · Builder shares 166 oak planks equally among 2 teams. How many oak planks does each team get? = 83 (H)

Clue 4 (Percentages): "SCRATCHES OF IRON WERE LEFT ON THE ARCHWAY"

40% of 25 = 10 (S) · 25% of 112 = 28 (R) · 75% of 40 = 30 (I) · 20% of 95 = 19 (O) · 75% of 44 = 33 (C) · 5% of 900 = 45 (Y) · 60% of 5 = 3 (E) · 20% of 20 = 4 (F) · 25% of 172 = 43 (T) · 50% of 48 = 24 (W) · 5% of 680 = 34 (H) · 50% of 58 = 29 (A) · 10% of 230 = 23 (N) · 25% of 56 = 14 (L)

Clue 5 (Fractions of a number): surviving statement is box 7 → Sven

1/3 of 30 = 10 · 8/10 of 15 = 12 · 2/4 of 22 = 11 · 3/10 of 10 = 3 · 2/8 of 8 = 2 · 8/10 of 10 = 8 · 3/4 of 8 = 6 · 2/10 of 25 = 5 · 1/2 of 18 = 9 · 2/10 of 5 = 1 · 4/10 of 10 = 4