



The Crafting Citadel Caper

Grade 6 math · Fractions of a number, Subtraction, Multiplication, Word problems · Reading level grades 5-6

Detective: _____ Date: _____

A rogue griefer has locked the Master Builder in a bedrock cage and scrambled the redstone schematics! We need to find the culprit before the server resets!

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 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	OFF-HAND ITEM	DOMINANT HAND	SKIN HAIR COLOR	DEFENSE COUNTER
Grian	Diamond Pickaxe	Splash Potions	Left-handed	Brown blocky hair	Cat meows
Agnes	Elytra Wings	Golden Apples	Left-handed	Brown blocky hair	Water buckets
CaptainSparklez	Diamond Pickaxe	Golden Apples	Right-handed	Blonde blocky hair	Water buckets
Dream	Elytra Wings	Ender Pearls	Right-handed	Brown blocky hair	Cat meows
Impulse	Fire Charge	Golden Apples	Left-handed	Brown blocky hair	Milk buckets
LDShadowLady	Redstone Launcher	Golden Apples	Left-handed	Brown blocky hair	Cat meows
Etho	Redstone Launcher	Splash Potions	Left-handed	Black blocky hair	Milk buckets
BdoubleO	Redstone Launcher	Firework Rockets	Left-handed	Blonde blocky hair	Water buckets
Pearl	Elytra Wings	Spawn Eggs	Left-handed	Brown blocky hair	Cat meows
Jeb	Netherite Sword	Firework Rockets	Right-handed	Black blocky hair	Water buckets
Mumbo	Elytra Wings	Spawn Eggs	Right-handed	Brown blocky hair	Cat meows
Cleo	Redstone Launcher	Splash Potions	Right-handed	Brown blocky hair	Cat meows
Tango	Fire Charge	Spawn Eggs	Left-handed	Brown blocky hair	Water buckets
Alex	Elytra Wings	Splash Potions	Left-handed	Black blocky hair	Cat meows
DanTDM	Netherite Sword	Firework Rockets	Right-handed	Brown blocky hair	Water buckets
Iskall	Fire Charge	Ender Pearls	Left-handed	Brown blocky hair	Water buckets
Steve	Redstone Launcher	Firework Rockets	Left-handed	Brown blocky hair	Cat meows
Stampy	Fire Charge	Spawn Eggs	Left-handed	Brown blocky hair	Cat meows
Vu	Diamond Pickaxe	Golden Apples	Right-handed	Brown blocky hair	Milk buckets
Notch	Netherite Sword	Ender Pearls	Left-handed	Blonde blocky hair	Milk buckets
Scar	Netherite Sword	Ender Pearls	Left-handed	Blonde blocky hair	Cat meows

CLUE 1

Fractions of a number

We scan the ruined server database. A fraction of the corrupted chunk files can be recovered to reveal the villain's main gear.

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

29 18 10 29 13 16 32 10 29 11 24 10 36 4 24 29 27 36 10

36 23 8 13 36 18 23 24 29 37 24 4 36

$2/10$ of 145 = → T	$3/8$ of 96 = → S	$4/8$ of 46 = → P
$4/10$ of 20 = → L	$4/10$ of 40 = → R	$4/8$ of 64 = → G
$2/3$ of 27 = → H	$5/10$ of 26 = → A	$2/8$ of 108 = → U
$1/2$ of 20 = → E	$2/6$ of 72 = → O	$1/4$ of 16 = → N
$4/8$ of 74 = → I	$1/2$ of 22 = → D	

Scratch space:

CLUE 2 Subtraction

We count the obsidian blocks left at the grieved base. Subtracting the broken blocks from the total reveals their dominant hand.

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

L												L			
3462	4899	1004	6090	3437	2924	5140	6833	4899	6833	2473	3462	1406	5051	6655	

	L																		
4293	3462	2924	5051	4899	1303	4899	5140	6090	4965	2924	2934	6833	4899	6090	4899	5051	6090	4899	6833

$$5174 - 1712 = \boxed{} \rightarrow \boxed{\text{L}}$$

$$9974 - 4923 = \boxed{} \rightarrow \boxed{\text{C}}$$

$$4690 - 3284 = \boxed{} \rightarrow \boxed{\text{O}}$$

$$8191 - 1536 = \boxed{} \rightarrow \boxed{\text{K}}$$

$$4455 - 1982 = \boxed{} \rightarrow \boxed{\text{B}}$$

$$6094 - 1129 = \boxed{} \rightarrow \boxed{\text{W}}$$

$$7716 - 2576 = \boxed{} \rightarrow \boxed{\text{N}}$$

$$6760 - 3836 = \boxed{} \rightarrow \boxed{\text{A}}$$

$$7623 - 4186 = \boxed{} \rightarrow \boxed{\text{H}}$$

$$4828 - 3525 = \boxed{} \rightarrow \boxed{\text{M}}$$

$$8055 - 3156 = \boxed{} \rightarrow \boxed{\text{E}}$$

$$8741 - 4448 = \boxed{} \rightarrow \boxed{\text{P}}$$

$$6451 - 3517 = \boxed{} \rightarrow \boxed{\text{S}}$$

$$10178 - 3345 = \boxed{} \rightarrow \boxed{\text{D}}$$

$$9725 - 3635 = \boxed{} \rightarrow \boxed{\text{T}}$$

$$2368 - 1364 = \boxed{} \rightarrow \boxed{\text{F}}$$

Scratch space:

CLUE 3

Multiplication facts (1-12)

The culprit left tracks in the desert biome. Multiplying the footprint count by the block distance reveals their weakness.

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

A						A											
3	44	120	2	25	6	3	63	27	18	120	50	7	6	3	10	18	25
								A		A							
63	1	18	18	64	18	27	32	3	50	3	32						

$1 \times 3 = \square \rightarrow \boxed{\text{A}}$

$7 \times 9 = \square \rightarrow \boxed{\text{T}}$

$1 \times 2 = \square \rightarrow \boxed{\text{U}}$

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

$3 \times 6 = \square \rightarrow \boxed{\text{E}}$

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

$8 \times 8 = \square \rightarrow \boxed{\text{N}}$

$7 \times 1 = \square \rightarrow \boxed{\text{S}}$

$1 \times 1 = \square \rightarrow \boxed{\text{H}}$

$11 \times 4 = \square \rightarrow \boxed{\text{L}}$

$10 \times 1 = \square \rightarrow \boxed{\text{R}}$

$4 \times 8 = \square \rightarrow \boxed{\text{Y}}$

$12 \times 10 = \square \rightarrow \boxed{\text{O}}$

$10 \times 5 = \square \rightarrow \boxed{\text{W}}$

$1 \times 6 = \square \rightarrow \boxed{\text{C}}$

Scratch space:

CLUE 4

Word problems

We talk to a wandering trader who saw the escape. Solving his riddle about traded emeralds uncovers a clue about their hair color.

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

A strand of B B K Y H A I hair turned up at the scene.

Golem lined up 3 rows of 10 ender pearls. How many ender pearls in all?

Answer: → B

Golem found 67 oak logs yesterday and 44 more today. How many oak logs in all?

Answer: → N

Golem found 19 ender pearls yesterday and 83 more today. How many ender pearls in all?

Answer: → L

Golem found 31 ender pearls yesterday and 36 more today. How many ender pearls in all?

Answer: → R

Golem found 16 ender pearls yesterday and 11 more today. How many ender pearls in all?

Answer: → C

There were 113 redstone dusts. 21 were used up. How many redstone dusts are left?

Answer: → W

Golem lined up 3 rows of 3 redstone dusts. How many redstone dusts in all?

Answer: → O

Scratch space:

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

To double-check our work, we sort a fraction of the loose items found near the bedrock cage to confirm the final detail.

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:

$2/4 \text{ of } 22 = \boxed{}$

$2/4 \text{ of } 24 = \boxed{}$

$2/10 \text{ of } 5 = \boxed{}$

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

$4/8 \text{ of } 18 = \boxed{}$

$1/4 \text{ of } 32 = \boxed{}$

$1/4 \text{ of } 16 = \boxed{}$

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

$5/8 \text{ of } 8 = \boxed{}$

$1/3 \text{ of } 30 = \boxed{}$

$1/3 \text{ of } 21 = \boxed{}$

Step 2 - cross out the sentence with each answer:

1. The villain fired a redstone launcher, then boosted away with firework rockets.
2. The villain threw a fire charge, then ate shiny golden apples.
3. The villain threw a fire charge, then threw dangerous spawn eggs.
4. The villain swung a diamond pickaxe, then boosted away with firework rockets.
5. The villain fired a redstone launcher, then threw dangerous spawn eggs.
6. The villain swung a netherite sword, then tossed healing splash potions.
7. The villain threw a fire charge, then tossed healing splash potions.
8. The villain swung a netherite sword, then teleported with ender pearls.
9. The villain glided with elytra wings, then teleported with ender pearls.
10. The villain swung a netherite sword, then ate shiny golden apples.
11. The villain fired a redstone launcher, then ate shiny golden apples.
12. The villain glided with elytra wings, then threw dangerous spawn eggs.

Answer Key

The Crafting Citadel Caper

Culprit: Stampy

Fire Charge · Spawn Eggs · Left-handed · Brown blocky hair · Cat meows

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

Clue 1 (Fractions of a number): "THE TARGET DOES NOT USE SPLASH POTIONS"

$2/10$ of 145 = 29 (T) · $3/8$ of 96 = 36 (S) · $4/8$ of 46 = 23 (P) · $4/10$ of 20 = 8 (L) · $4/10$ of 40 = 16 (R) · $4/8$ of 64 = 32 (G) · $2/3$ of 27 = 18 (H) · $5/10$ of 26 = 13 (A) · $2/8$ of 108 = 27 (U) · $1/2$ of 20 = 10 (E) · $2/6$ of 72 = 24 (O) · $1/4$ of 16 = 4 (N) · $4/8$ of 74 = 37 (I) · $1/2$ of 22 = 11 (D)

Clue 2 (Subtraction): "LEFT HANDED BLOCK PLACEMENT WAS DETECTED"

$5174 - 1712 = 3462$ (L) · $9974 - 4923 = 5051$ (C) · $4690 - 3284 = 1406$ (O) · $8191 - 1536 = 6655$ (K) · $4455 - 1982 = 2473$ (B) · $6094 - 1129 = 4965$ (W) · $7716 - 2576 = 5140$ (N) · $6760 - 3836 = 2924$ (A) · $7623 - 4186 = 3437$ (H) · $4828 - 3525 = 1303$ (M) · $8055 - 3156 = 4899$ (E) · $8741 - 4448 = 4293$ (P) · $6451 - 3517 = 2934$ (S) · $10178 - 3345 = 6833$ (D) · $9725 - 3635 = 6090$ (T) · $2368 - 1364 = 1004$ (F)

Clue 3 (Multiplication facts (1-12)): "A LOUD CAT MEOW SCARED THE ENEMY AWAY"

$1 \times 3 = 3$ (A) · $7 \times 9 = 63$ (T) · $1 \times 2 = 2$ (U) · $9 \times 3 = 27$ (M) · $3 \times 6 = 18$ (E) · $5 \times 5 = 25$ (D) · $8 \times 8 = 64$ (N) · $7 \times 1 = 7$ (S) · $1 \times 1 = 1$ (H) · $11 \times 4 = 44$ (L) · $10 \times 1 = 10$ (R) · $4 \times 8 = 32$ (Y) · $12 \times 10 = 120$ (O) · $10 \times 5 = 50$ (W) · $1 \times 6 = 6$ (C)

Clue 4 (Word problems): "BROWN BLOCKY HAIR"

Golem lined up 3 rows of 10 ender pearls. How many ender pearls in all? = 30 (B) · Golem found 67 oak logs yesterday and 44 more today. How many oak logs in all? = 111 (N) · Golem found 19 ender pearls yesterday and 83 more today. How many ender pearls in all? = 102 (L) · Golem found 31 ender pearls yesterday and 36 more today. How many ender pearls in all? = 67 (R) · Golem found 16 ender pearls yesterday and 11 more today. How many ender pearls in all? = 27 (C) · There were 113 redstone dusts. 21 were used up. How many redstone dusts are left? = 92 (W) · Golem lined up 3 rows of 3 redstone dusts. How many redstone dusts in all? = 9 (O)

Clue 5 (Fractions of a number): surviving statement is box 3 → Stampy

$2/4$ of 22 = 11 · $2/4$ of 24 = 12 · $2/10$ of 5 = 1 · $3/4$ of 8 = 6 · $4/8$ of 18 = 9 · $1/4$ of 32 = 8 · $1/4$ of 16 = 4 · $3/6$ of 4 = 2 · $5/8$ of 8 = 5 · $1/3$ of 30 = 10 · $1/3$ of 21 = 7