The Mystery of Blocky Keep

Grade 5 math · Subtraction, Fractions of a number, Order of operations, Multiplication, Division · Reading level grades 3-4

Detective: _____ **Date:** _____

Someone scrambled the redstone blueprints at Blocky Keep! Solve the math clues to find out which suspect did it.

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 Golem is _____

Possible suspects

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

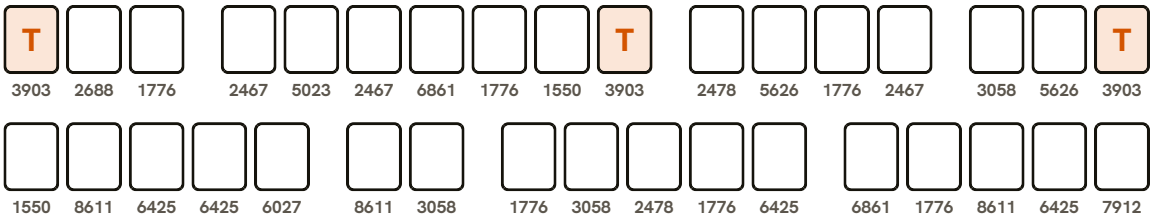
NAME	SKILL	ITEM	DOMINANT HAND	HAIRSTYLE	COUNTER
Peyton Flint	redstone wiring	golden apple	right handed	braided hair	water buckets
Riley Birch	redstone wiring	ender pearl	left handed	spiky hair	splash potions
Parker Gravel	pixel mining	diamond sword	right handed	spiky hair	water buckets
Sam Cobble	redstone wiring	diamond sword	left handed	braided hair	music discs
Skyler Glowstone	taming wolves	firework rocket	right handed	braided hair	music discs
Jesse Sandstone	brewing potions	redstone torch	right handed	braided hair	music discs
Steve Block	redstone wiring	ender pearl	right handed	braided hair	music discs
Rowan Prism	redstone wiring	redstone torch	right handed	spiky hair	music discs
Sawyer Andesite	taming wolves	golden apple	right handed	braided hair	water buckets
Finley Copper	redstone wiring	firework rocket	right handed	curly hair	music discs
Hayden Basalt	redstone wiring	diamond sword	right handed	braided hair	music discs
Emerson Clay	brewing potions	firework rocket	right handed	braided hair	music discs
Avery Obsidian	taming wolves	ender pearl	right handed	spiky hair	music discs
Kai Terracotta	brewing potions	diamond sword	left handed	spiky hair	splash potions
Morgan Oak	redstone wiring	redstone torch	right handed	curly hair	music discs
Reese Quartz	building towers	golden apple	left handed	curly hair	water buckets
Quinn Redstone	taming wolves	firework rocket	left handed	braided hair	music discs
Jordan Lapis	pixel mining	ender pearl	left handed	curly hair	music discs
Harper Diorite	building towers	diamond sword	left handed	spiky hair	music discs
Casey Spruce	building towers	golden apple	right handed	spiky hair	music discs
Ellis Granite	pixel mining	ender pearl	right handed	curly hair	water buckets

make your own at mathcrackers.com

CLUE 1 Subtraction

> A sneaky Golem took blocks from the village warehouse overnight. Builder Alex counts what remains to see how many were taken.

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



4812 - 909 = ☐ → T

6515 - 4965 = ☐ → C

5623 - 3847 = ☐ → E

10769 - 4742 = ☐ → Y

6405 - 3717 = ☐ → H

5876 - 853 = ☐ → U

11681 - 4820 = ☐ → P

7106 - 4048 = ☐ → N

9844 - 1233 = ☐ → A

5956 - 330 = ☐ → O

10438 - 2526 = ☐ → L

4892 - 2414 = ☐ → D

2502 - 35 = ☐ → S

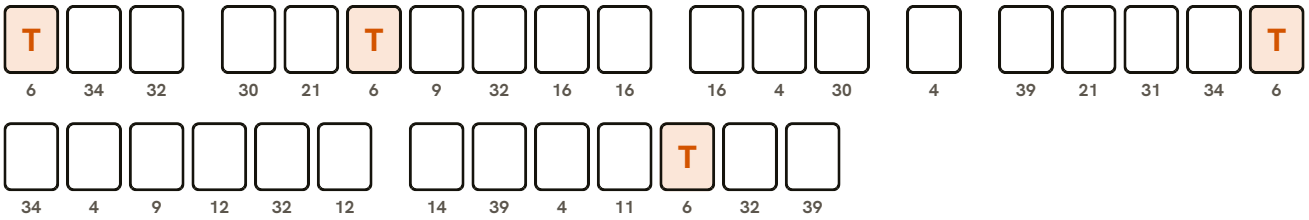
7439 - 1014 = ☐ → R

Scratch space:

CLUE 2 Fractions of a number

> A hidden chest in the mineshaft held a stack of shiny gems. Builder Alex takes a fraction of the stack to test for redstone power.

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



2/4 of 12 = ☐ → T

2/3 of 45 = ☐ → W

9/10 of 10 = ☐ → N

1/5 of 160 = ☐ → E

6/8 of 52 = ☐ → R

2/3 of 21 = ☐ → C

3/6 of 32 = ☐ → S

1/4 of 16 = ☐ → A

2/10 of 55 = ☐ → F

1/4 of 84 = ☐ → I

1/6 of 186 = ☐ → G

4/6 of 18 = ☐ → D

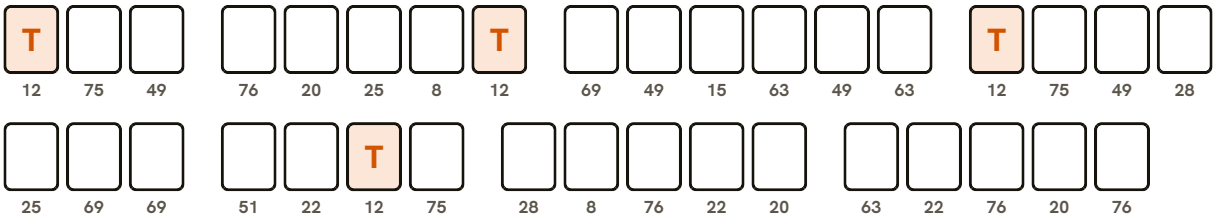
1/2 of 68 = ☐ → H

Scratch space:

CLUE 3 Order of operations

> To unlock the ancient Nether gate, Builder Alex must follow the exact order of levers and buttons on the puzzle door.

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



8 × 3 - 12 = ☐ → T

2 + 3 × 2 = ☐ → U

8 × 9 - 23 = ☐ → E

6 × 11 - 3 = ☐ → D

3 + 8 × 6 = ☐ → W

3 × 10 - 2 = ☐ → M

4 + 4 × 4 = ☐ → C

10 × 10 - 25 = ☐ → H

49 + 9 × 3 = ☐ → S

2 × 8 - 1 = ☐ → N

34 + 7 × 5 = ☐ → F

11 + 7 × 2 = ☐ → O

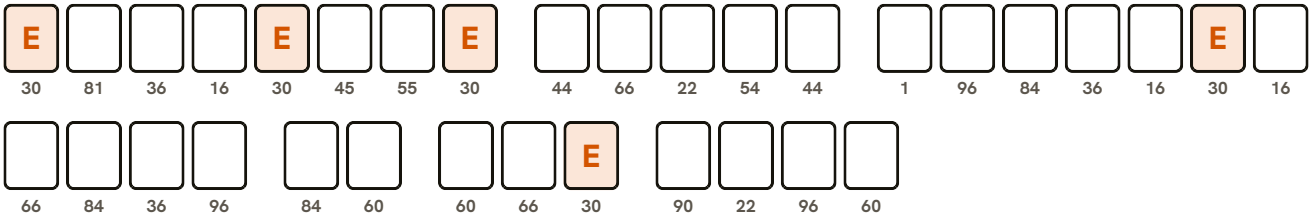
10 + 6 × 2 = ☐ → I

Scratch space:

CLUE 4 Multiplication facts (1-12)

> The farm harvest was packed neatly into equal rows of storage crates ready for shipping.

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



3 × 10 = ☐ → E	11 × 6 = ☐ → H	5 × 11 = ☐ → C
12 × 8 = ☐ → R	9 × 5 = ☐ → N	9 × 10 = ☐ → F
9 × 9 = ☐ → V	1 × 1 = ☐ → B	6 × 9 = ☐ → W
7 × 12 = ☐ → A		
4 × 4 = ☐ → D	2 × 11 = ☐ → O	12 × 5 = ☐ → T
11 × 4 = ☐ → S	4 × 9 = ☐ → I	

Scratch space:

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

Builder Alex divides the remaining emeralds equally among the guard posts to complete the investigation.

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:

10 ÷ 1 = ☐ | 60 ÷ 5 = ☐ | 32 ÷ 4 = ☐ | 20 ÷ 10 = ☐ | 35 ÷ 7 = ☐

66 ÷ 6 = ☐ | 72 ÷ 12 = ☐ | 48 ÷ 12 = ☐ | 108 ÷ 12 = ☐ | 56 ÷ 8 = ☐

6 ÷ 6 = ☐

Step 2 - cross out the sentence with each answer:

1. The villain tried brewing potions, then ate a golden apple.
2. The villain tried brewing potions, then threw an ender pearl.
3. The villain tried brewing potions, then lit a redstone torch.
4. The villain tried brewing potions, then swung a diamond sword.
5. The villain started taming wolves, then swung a diamond sword.
6. The villain finished redstone wiring, then launched a firework rocket.
7. The villain kept building towers, then launched a firework rocket.
8. The villain started taming wolves, then launched a firework rocket.
9. The villain started taming wolves, then ate a golden apple.
10. The villain tried brewing potions, then launched a firework rocket.
11. The villain finished redstone wiring, then threw an ender pearl.
12. The villain finished redstone wiring, then swung a diamond sword.

TEACHER / PARENT

Answer Key

The Mystery of Blocky Keep

Culprit: Jesse Sandstone

brewing potions · redstone torch · right handed · braided hair · music discs

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

Clue 1 (Subtraction): "THE SUSPECT DOES NOT CARRY AN ENDER PEARL"

4812 - 909 = 3903 (T) · 6515 - 4965 = 1550 (C) · 5623 - 3847 = 1776 (E) · 10769 - 4742 = 6027 (Y) · 6405 - 3717 = 2688 (H) · 5876 - 853 = 5023 (U) · 11681 - 4820 = 6861 (P) · 7106 - 4048 = 3058 (N) · 9844 - 1233 = 8611 (A) · 5956 - 330 = 5626 (O) · 10438 - 2526 = 7912 (L) · 4892 - 2414 = 2478 (D) · 2502 - 35 = 2467 (S) · 7439 - 1014 = 6425 (R)

Clue 2 (Fractions of a number): "THE WITNESS SAW A RIGHT HANDED CRAFTER"

2/4 of 12 = 6 (T) · 2/3 of 45 = 30 (W) · 9/10 of 10 = 9 (N) · 1/5 of 160 = 32 (E) · 6/8 of 52 = 39 (R) · 2/3 of 21 = 14 (C) · 3/6 of 32 = 16 (S) · 1/4 of 16 = 4 (A) · 2/10 of 55 = 11 (F) · 1/4 of 84 = 21 (I) · 1/6 of 186 = 31 (G) · 4/6 of 18 = 12 (D) · 1/2 of 68 = 34 (H)

Clue 3 (Order of operations): "THE SCOUT FENDED THEM OFF WITH MUSIC DISCS"

8 × 3 - 12 = 12 (T) · 2 + 3 × 2 = 8 (U) · 8 × 9 - 23 = 49 (E) · 6 × 11 - 3 = 63 (D) · 3 + 8 × 6 = 51 (W) · 3 × 10 - 2 = 28 (M) · 4 + 4 × 4 = 20 (C) · 10 × 10 - 25 = 75 (H) · 49 + 9 × 3 = 76 (S) · 2 × 8 - 1 = 15 (N) · 34 + 7 × 5 = 69 (F) · 11 + 7 × 2 = 25 (O) · 10 + 6 × 2 = 22 (I)

Clue 4 (Multiplication facts (1-12)): "EVIDENCE SHOWS BRAIDED HAIR AT THE FORT"

3 × 10 = 30 (E) · 11 × 6 = 66 (H) · 5 × 11 = 55 (C) · 12 × 8 = 96 (R) · 9 × 5 = 45 (N) · 9 × 10 = 90 (F) · 9 × 9 = 81 (V) · 1 × 1 = 1 (B) · 6 × 9 = 54 (W) · 7 × 12 = 84 (A) · 4 × 4 = 16 (D) · 2 × 11 = 22 (O) · 12 × 5 = 60 (T) · 11 × 4 = 44 (S) · 4 × 9 = 36 (I)

Clue 5 (Division facts (1-12)): surviving statement is box 3 → Jesse Sandstone

10 ÷ 1 = 10 · 60 ÷ 5 = 12 · 32 ÷ 4 = 8 · 20 ÷ 10 = 2 · 35 ÷ 7 = 5 · 66 ÷ 6 = 11 · 72 ÷ 12 = 6 · 48 ÷ 12 = 4 · 108 ÷ 12 = 9 · 56 ÷ 8 = 7 · 6 ÷ 6 = 1