

The Great Redstone Heist

Grade 2 math · Addition, Subtraction, Bar models, Place value, Missing addends · Reading level grades 1-2

Detective: _____ **Date:** _____

A sneaky player snuck into the town square and stole the giant gold block! The crafting club must find out who did it before the server restarts. Look for clues left in the digital dirt.

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 WEAPON	SURVIVAL GEAR	DOMINANT HAND	HELMET STYLE	DEFENSIVE BLOCK
Notch	tnt block	netherite boots	right handed swing	leather cap	sweet berry bush
Ranboo	fire charge	water bucket	left handed swing	leather cap	obsidian wall
DanTDM	potion of harming	netherite boots	right handed swing	iron helmet	sweet berry bush
JackSucksAtLife	enchanted bow	elytra wings	right handed swing	iron helmet	milk bucket
Steve	potion of harming	ender pearls	right handed swing	iron helmet	milk bucket
Skeppy	fire charge	elytra wings	right handed swing	gold helmet	milk bucket
Sky	potion of harming	elytra wings	right handed swing	leather cap	sweet berry bush
AntFrost	potion of harming	golden apples	left handed swing	iron helmet	sweet berry bush
Grian	fire charge	elytra wings	right handed swing	gold helmet	sweet berry bush
Jeb	diamond sword	water bucket	left handed swing	gold helmet	sweet berry bush
Tubbo	tnt block	netherite boots	left handed swing	leather cap	sweet berry bush
Philza	fire charge	water bucket	right handed swing	iron helmet	sweet berry bush
Alex	enchanted bow	elytra wings	right handed swing	iron helmet	sweet berry bush
CaptainSparklez	fire charge	water bucket	right handed swing	gold helmet	milk bucket
Sapnap	potion of harming	elytra wings	right handed swing	iron helmet	sweet berry bush
Aphmau	enchanted bow	golden apples	right handed swing	iron helmet	sweet berry bush
George	tnt block	ender pearls	right handed swing	gold helmet	sweet berry bush
Stampy	tnt block	ender pearls	right handed swing	iron helmet	milk bucket
Preston	tnt block	netherite boots	left handed swing	gold helmet	obsidian wall
Tommy	tnt block	water bucket	right handed swing	iron helmet	milk bucket
BadBoyHalo	diamond sword	elytra wings	left handed swing	gold helmet	milk bucket

CLUE 1 Addition

We need to count the torches left in the dark cave. Let us add the first row of torches and the second row of torches together.

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

T																	T
37	26	24	68	52	56	56	50	52	29	60	59	24	36	29	59	37	
								T								T	
94	50	97	97	74	50	72	50	37	24	97	44	46	94	95	24	37	

$21 + 16 = \square \rightarrow$ T	$42 + 17 = \square \rightarrow$ O	$19 + 10 = \square \rightarrow$ N
$32 + 42 = \square \rightarrow$ Y	$20 + 26 = \square \rightarrow$ U	$22 + 34 = \square \rightarrow$ L
$35 + 25 = \square \rightarrow$ D	$43 + 54 = \square \rightarrow$ R	$33 + 19 = \square \rightarrow$ I
$21 + 23 = \square \rightarrow$ B	$33 + 17 = \square \rightarrow$ A	$22 + 14 = \square \rightarrow$ S
$9 + 15 = \square \rightarrow$ E	$10 + 16 = \square \rightarrow$ H	$28 + 44 = \square \rightarrow$ W
$36 + 59 = \square \rightarrow$ K	$28 + 66 = \square \rightarrow$ C	$33 + 35 = \square \rightarrow$ V

Scratch space:

CLUE 2
Subtraction

A green creeper blew up near our storage chests. Let us subtract the broken chests to see how many we have left.

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

T															T			T		
54	69	23	89	52	23	26	12	55	82	50	26	12	55	54	69	54	69	23		

				T				
85	55	50	69	54	69	62	82	45

91 - 37 = → T	85 - 3 = → N	128 - 39 = → F
84 - 39 = → D	19 - 7 = → W	56 - 4 = → O
68 - 18 = → G	57 - 31 = → S	98 - 29 = → H
68 - 13 = → I	97 - 12 = → R	46 - 23 = → E
73 - 11 = → A		

Scratch space:

CLUE 3

Bar model word problems

Steve and Alex have stacks of redstone. We can draw blocks in a bar model to see who has more.

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

A number line from 0 to 100 with increments of 10. The number 35 is marked with a red dot and labeled 'S'. The number 47 is marked with a red dot and labeled 'U'. The number 6 is marked with a red dot and labeled 'H'. The number 35 is also marked with a red dot and labeled 'S'.

There were 45 redstone dust in all. 10 redstone dust were used. How many redstone dust are left?

draw a bar model

Answer: → **S**

One group collected 16 redstone dust and another group collected 10 redstone dust. How many redstone dust in all?

draw a bar model

Answer: → **E**

There were 9 cooked porkchops in all. 3 cooked porkchops were used. How many cooked porkchops are left?

draw a bar model

Answer: → **R**

The red team has 52 cooked porkchops and the blue team has 4 cooked porkchops. How many more cooked porkchops does the red team have?

draw a bar model

Answer: → **W**

There were 49 slimeballs in all. 2 slimeballs were used. How many slimeballs are left?

draw a bar model

Answer: → **B**

There were 9 slimeballs in all. 2 slimeballs were used. How many slimeballs are left?

draw a bar model

Answer: → **Y**

One group collected 13 slimeballs and another group collected 24 slimeballs. How many slimeballs in all?

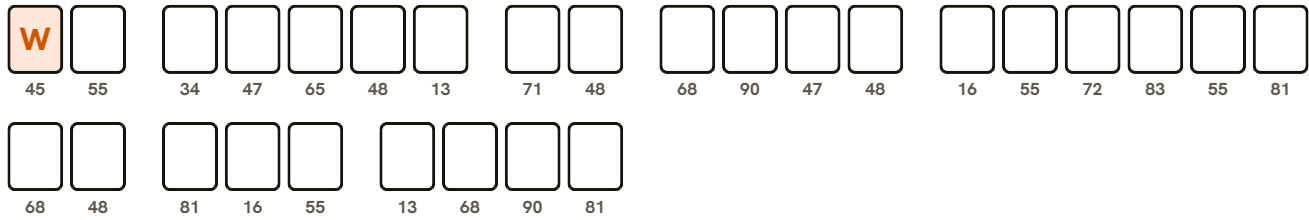
draw a bar model

Answer: → **T**

CLUE 4
Place value

Look at the stacks of iron blocks. We have groups of ten blocks and some single blocks left over.

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



What number has 4 tens and 5 ones? → **W**

What number has 7 tens and 2 ones? → **L**

What number has 6 tens and 8 ones? → **I**

What number has 1 ten and 6 ones? → **H**

What number has 3 tens and 4 ones? → **F**

What number has 5 tens and 5 ones? → **E**

What number has 1 ten and 3 ones? → **D**

What number has 6 tens and 5 ones? → **U**

What number has 8 tens and 3 ones? → **M**

What number has 4 tens and 8 ones? → **N**

What number has 9 tens and 0 ones? → **R**

What number has 4 tens and 7 ones? → **O**

What number has 7 tens and 1 one? → **A**

What number has 8 tens and 1 one? → **T**

Scratch space:

CLUE 5**Missing addends - the last clue**

Our inventory slot can hold a full stack. How many more emeralds do we need to make a full stack?

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:

$5 + \underline{\quad} = 12$

$5 + \underline{\quad} = 7$

$5 + \underline{\quad} = 13$

$3 + \underline{\quad} = 13$

$6 + \underline{\quad} = 18$

$6 + \underline{\quad} = 11$

$6 + \underline{\quad} = 10$

$5 + \underline{\quad} = 14$

$6 + \underline{\quad} = 9$

$2 + \underline{\quad} = 8$

$4 + \underline{\quad} = 5$

Step 2 - cross out the sentence with each answer:

1. The villain swung a sharp diamond sword, then soared away using elytra wings.
2. The villain splashed a potion of harming, then stomped away in netherite boots.
3. The villain threw a blazing fire charge, then poured out a water bucket.
4. The villain threw a blazing fire charge, then ate a shiny golden apple.
5. The villain threw a blazing fire charge, then teleported away with ender pearls.
6. The villain splashed a potion of harming, then teleported away with ender pearls.
7. The villain splashed a potion of harming, then soared away using elytra wings.
8. The villain shot an enchanted bow, then soared away using elytra wings.
9. The villain splashed a potion of harming, then poured out a water bucket.
10. The villain placed a lit TNT block, then ate a shiny golden apple.
11. The villain shot an enchanted bow, then ate a shiny golden apple.
12. The villain shot an enchanted bow, then poured out a water bucket.

Answer Key

The Great Redstone Heist

Culprit: Aphmau

enchanted bow · golden apples · right handed swing · iron helmet · sweet berry bush

Trail: Start 21 → Clue 1 16 → Clue 2 12 → Clue 3 8 → Clue 4 4 → Clue 5 1

Clue 1 (Addition): "THE VILLAIN DOES NOT CARRY A WATER BUCKET"

$21 + 16 = 37$ (T) · $42 + 17 = 59$ (O) · $19 + 10 = 29$ (N) · $32 + 42 = 74$ (Y) · $20 + 26 = 46$ (U) · $22 + 34 = 56$ (L) · $35 + 25 = 60$ (D) · $43 + 54 = 97$ (R) · $33 + 19 = 52$ (I) · $21 + 23 = 44$ (B) · $33 + 17 = 50$ (A) · $22 + 14 = 36$ (S) · $9 + 15 = 24$ (E) · $10 + 16 = 26$ (H) · $28 + 44 = 72$ (W) · $36 + 59 = 95$ (K) · $28 + 66 = 94$ (C) · $33 + 35 = 68$ (V)

Clue 2 (Subtraction): "THE FOE SWINGS WITH THE RIGHT HAND"

$91 - 37 = 54$ (T) · $85 - 3 = 82$ (N) · $128 - 39 = 89$ (F) · $84 - 39 = 45$ (D) · $19 - 7 = 12$ (W) · $56 - 4 = 52$ (O) · $68 - 18 = 50$ (G) · $57 - 31 = 26$ (S) · $98 - 29 = 69$ (H) · $68 - 13 = 55$ (I) · $97 - 12 = 85$ (R) · $46 - 23 = 23$ (E) · $73 - 11 = 62$ (A)

Clue 3 (Bar model word problems): "SWEET BERRY BUSH"

There were 45 redstone dust in all. 10 redstone dust were used. How many redstone dust are left? = 35 (S) · One group collected 16 redstone dust and another group collected 10 redstone dust. How many redstone dust in all? = 26 (E) · There were 9 cooked porkchops in all. 3 cooked porkchops were used. How many cooked porkchops are left? = 6 (R) · The red team has 52 cooked porkchops and the blue team has 4 cooked porkchops. How many more cooked porkchops does the red team have? = 48 (W) · There were 49 slimeballs in all. 2 slimeballs were used. How many slimeballs are left? = 47 (B) · There were 9 slimeballs in all. 2 slimeballs were used. How many slimeballs are left? = 7 (Y) · One group collected 13 slimeballs and another group collected 24 slimeballs. How many slimeballs in all? = 37 (T)

Clue 4 (Place value): "WE FOUND AN IRON HELMET IN THE DIRT"

What number has 4 tens and 5 ones? = 45 (W) · What number has 7 tens and 2 ones? = 72 (L) · What number has 6 tens and 8 ones? = 68 (I) · What number has 1 ten and 6 ones? = 16 (H) · What number has 3 tens and 4 ones? = 34 (F) · What number has 5 tens and 5 ones? = 55 (E) · What number has 1 ten and 3 ones? = 13 (D) · What number has 6 tens and 5 ones? = 65 (U) · What number has 8 tens and 3 ones? = 83 (M) · What number has 4 tens and 8 ones? = 48 (N) · What number has 9 tens and 0 ones? = 90 (R) · What number has 4 tens and 7 ones? = 47 (O) · What number has 7 tens and 1 one? = 71 (A) · What number has 8 tens and 1 one? = 81 (T)

Clue 5 (Missing addends): surviving statement is box 11 → Aphmau

$5 + \underline{\quad} = 12 = 7$ · $5 + \underline{\quad} = 7 = 2$ · $5 + \underline{\quad} = 13 = 8$ · $3 + \underline{\quad} = 13 = 10$ · $6 + \underline{\quad} = 18 = 12$ · $6 + \underline{\quad} = 11 = 5$ · $6 + \underline{\quad} = 10 = 4$ · $5 + \underline{\quad} = 14 = 9$ · $6 + \underline{\quad} = 9 = 3$ · $2 + \underline{\quad} = 8 = 6$ · $4 + \underline{\quad} = 5 = 1$