

The Case of the Missing Diamond Block

Grade 4 math · Place value, Addition, Subtraction, Rounding, Missing addends · Reading level grades 3-4

Detective: _____ Date: _____

Someone snuck into the town square and grieved the giant diamond statue! The Lead Builder needs your help. We must trace the blocky footprints, crack the redstone codes, and find the sneaky griever before they ruin the whole server!

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 griever is _____

Possible suspects

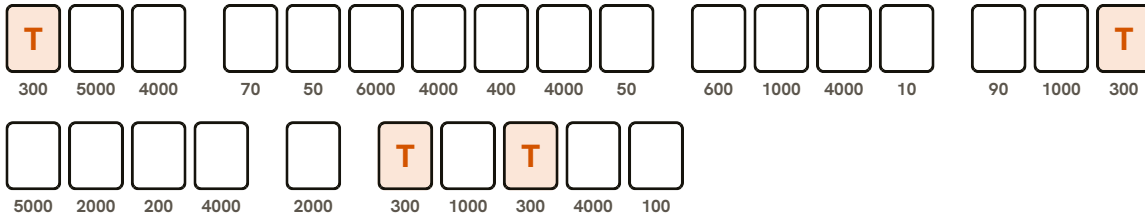
Cross off a row as each clue rules it out. The one left at the end is the culprit.

NAME	SUPER ABILITY	SURVIVAL GEAR	SWINGING HAND	HELMET CHOICE	GREATEST FEAR
Steve	redstone hacking	trident throwing	right handed swings	iron helmet	splash water
Dream	lava walking	trident throwing	right handed swings	iron helmet	splash water
Stampy	lava walking	trident throwing	right handed swings	iron helmet	milk buckets
Sb737	taming wolves	ender pearling	right handed swings	gold helmet	milk buckets
Pearlescent	speed bridging	elytra flying	right handed swings	gold helmet	splash water
Gemini	brewing potions	totem holding	right handed swings	iron helmet	soul sand
Alex	lava walking	elytra flying	left handed swings	iron helmet	splash water
Mumbo	speed bridging	totem holding	right handed swings	iron helmet	splash water
Joel	brewing potions	trident throwing	right handed swings	iron helmet	splash water
Tommy	taming wolves	shield blocking	left handed swings	gold helmet	soul sand
Sapnap	speed bridging	trident throwing	right handed swings	gold helmet	splash water
Skeppy	speed bridging	ender pearling	left handed swings	gold helmet	milk buckets
Ranboo	lava walking	shield blocking	left handed swings	diamond helmet	splash water
Lizzie	taming wolves	trident throwing	left handed swings	iron helmet	milk buckets
Grian	lava walking	elytra flying	right handed swings	iron helmet	splash water
Etho	taming wolves	ender pearling	left handed swings	iron helmet	soul sand
Hermit	brewing potions	elytra flying	right handed swings	diamond helmet	splash water
CaptainSparklez	taming wolves	elytra flying	left handed swings	gold helmet	splash water
Techno	speed bridging	shield blocking	right handed swings	gold helmet	splash water
BadBoyHalo	speed bridging	elytra flying	right handed swings	diamond helmet	soul sand
George	taming wolves	totem holding	left handed swings	iron helmet	milk buckets

CLUE 1 Place value

We found a locked chest with a digital display. The numbers on the screen show the exact place values of the block count used to build the statue.

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



What is the value of the 3 in 7,389? → **T**

What is the value of the 5 in 252? → **R**

What is the value of the 2 in 82,048? → **A**

What is the value of the 1 in 615? → **S**

What is the value of the 5 in 95,624? → **H**

What is the value of the 6 in 16,853? → **I**

What is the value of the 6 in 4,618? → **D**

What is the value of the 7 in 6,372? → **G**

What is the value of the 1 in 1,285? → **O**

What is the value of the 2 in 290? → **V**

What is the value of the 9 in 591? → **N**

What is the value of the 4 in 492? → **F**

What is the value of the 1 in 2,130? → **M**

What is the value of the 4 in 4,037? → **E**

Scratch space:

CLUE 2 Addition

To unlock the next clue, we have to count all the cobblestone and oak wood blocks the griefers dropped and add them together.

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

R																	
9599	4735	7841	2188	2612	2188	9687	6328	4137	3127	4137	3922	7475	4735	6328	7841	3922	

	R												
4376	9599	2322	7851	3127	2612	2188	3127	7841	9529	9687	3922	3922	

$4259 + 5340 = \square \rightarrow$ R	$2713 + 2022 = \square \rightarrow$ I	$1675 + 1452 = \square \rightarrow$ E
$1556 + 2581 = \square \rightarrow$ D	$6245 + 3442 = \square \rightarrow$ A	$6601 + 2928 = \square \rightarrow$ L
$5119 + 2732 = \square \rightarrow$ K	$3800 + 3675 = \square \rightarrow$ W	$1170 + 1018 = \square \rightarrow$ H
$3800 + 2528 = \square \rightarrow$ N	$5300 + 2541 = \square \rightarrow$ G	$1842 + 2534 = \square \rightarrow$ B
$2290 + 1632 = \square \rightarrow$ S	$1043 + 1279 = \square \rightarrow$ O	$1252 + 1360 = \square \rightarrow$ T

Scratch space:

CLUE 3

Subtraction

A sneaky creeper blew up near the supply chest! We must subtract the ruined iron ingots from our total to see what remains.

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

S				S							S					
5580	6914	5355	7671	5580	2878	6211	7671	1160	3881	7403	5580	5355	1126	6211	3881	1984
1160	2878	3881	4973	1984	1126	6211	4080									

$5623 - 43 = \square \rightarrow \boxed{\text{S}}$

$7374 - 3294 = \square \rightarrow \boxed{\text{N}}$

$2747 - 1621 = \square \rightarrow \boxed{\text{O}}$

$7632 - 4754 = \square \rightarrow \boxed{\text{H}}$

$8840 - 3485 = \square \rightarrow \boxed{\text{L}}$

$5549 - 4389 = \square \rightarrow \boxed{\text{T}}$

$9579 - 2176 = \square \rightarrow \boxed{\text{R}}$

$7971 - 2998 = \square \rightarrow \boxed{\text{M}}$

$11022 - 4811 = \square \rightarrow \boxed{\text{W}}$

$2230 - 246 = \square \rightarrow \boxed{\text{D}}$

$7901 - 4020 = \square \rightarrow \boxed{\text{E}}$

$11118 - 4204 = \square \rightarrow \boxed{\text{P}}$

$11922 - 4251 = \square \rightarrow \boxed{\text{A}}$

Scratch space:

CLUE 4 Rounding

Our coordinates tracker is fuzzy. We have to round the broken numbers to the nearest ten to find the griever's escape path.

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

W																			
3000	700	2300	2000	170	90	9000	7000	230	3700	20	30	230	70	700	9000	370	3700	2000	90

500	370	700	230	700	7000

Round 3,197 to the nearest thousand → **W**

Round 742 to the nearest hundred → **E**

Round 74 to the nearest ten → **H**

Round 93 to the nearest ten → **N**

Round 2,312 to the nearest hundred → **F**

Round 9,217 to the nearest thousand → **D**

Round 31 to the nearest ten → **T**

Round 368 to the nearest ten → **I**

Round 3,707 to the nearest hundred → **R**

Round 174 to the nearest ten → **U**

Round 6,953 to the nearest thousand → **S**

Round 473 to the nearest hundred → **P**

Round 226 to the nearest ten → **C**

Round 21 to the nearest ten → **A**

Round 2,490 to the nearest thousand → **O**

Scratch space:

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

The redstone repeater needs more dust to power up. We know the total charge needed, so we must calculate the missing amount to fix it.

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:

$16 + \underline{\quad} = 19$

$31 + \underline{\quad} = 38$

$11 + \underline{\quad} = 19$

$29 + \underline{\quad} = 35$

$26 + \underline{\quad} = 35$

$40 + \underline{\quad} = 44$

$10 + \underline{\quad} = 20$

$11 + \underline{\quad} = 16$

$30 + \underline{\quad} = 31$

$34 + \underline{\quad} = 46$

$18 + \underline{\quad} = 29$

Step 2 - cross out the sentence with each answer:

1. The villain brewed a splash potion of speed, then soared away using an elytra.
2. The villain hacked the redstone door open, then threw a loyalty trident.
3. The villain brewed a splash potion of speed, then threw a loyalty trident.
4. The villain built a bridge over the lava, then teleported with an ender pearl.
5. The villain brewed a splash potion of speed, then teleported with an ender pearl.
6. The villain built a bridge over the lava, then soared away using an elytra.
7. The villain walked right across the lava lake, then threw a loyalty trident.
8. The villain walked right across the lava lake, then soared away using an elytra.
9. The villain hacked the redstone door open, then teleported with an ender pearl.
10. The villain hacked the redstone door open, then blocked an arrow with a shield.
11. The villain walked right across the lava lake, then teleported with an ender pearl.
12. The villain tamed a pack of wild wolves, then teleported with an ender pearl.

Answer Key

The Case of the Missing Diamond Block

Culprit: Steve

redstone hacking · trident throwing · right handed swings · iron helmet · splash water

Trail: Start 21 → Clue 1 18 → Clue 2 11 → Clue 3 8 → Clue 4 4 → Clue 5 1

Clue 1 (Place value): "THE GRIEFER DOES NOT HAVE A TOTEM"

What is the value of the 3 in 7,389? = 300 (T) · What is the value of the 5 in 252? = 50 (R) · What is the value of the 2 in 82,048? = 2000 (A) · What is the value of the 1 in 615? = 10 (S) · What is the value of the 5 in 95,624? = 5000 (H) · What is the value of the 6 in 16,853? = 6000 (I) · What is the value of the 6 in 4,618? = 600 (D) · What is the value of the 7 in 6,372? = 70 (G) · What is the value of the 1 in 1,285? = 1000 (O) · What is the value of the 2 in 290? = 200 (V) · What is the value of the 9 in 591? = 90 (N) · What is the value of the 4 in 492? = 400 (F) · What is the value of the 1 in 2,130? = 100 (M) · What is the value of the 4 in 4,037? = 4000 (E)

Clue 2 (Addition): "RIGHT HANDED SWINGS BROKE THE GLASS"

4259 + 5340 = 9599 (R) · 2713 + 2022 = 4735 (I) · 1675 + 1452 = 3127 (E) · 1556 + 2581 = 4137 (D) · 6245 + 3442 = 9687 (A) · 6601 + 2928 = 9529 (L) · 5119 + 2732 = 7851 (K) · 3800 + 3675 = 7475 (W) · 1170 + 1018 = 2188 (H) · 3800 + 2528 = 6328 (N) · 5300 + 2541 = 7841 (G) · 1842 + 2534 = 4376 (B) · 2290 + 1632 = 3922 (S) · 1043 + 1279 = 2322 (O) · 1252 + 1360 = 2612 (T)

Clue 3 (Subtraction): "SPLASH WATER SLOWED THEM DOWN"

5623 - 43 = 5580 (S) · 7374 - 3294 = 4080 (N) · 2747 - 1621 = 1126 (O) · 7632 - 4754 = 2878 (H) · 8840 - 3485 = 5355 (L) · 5549 - 4389 = 1160 (T) · 9579 - 2176 = 7403 (R) · 7971 - 2998 = 4973 (M) · 11022 - 4811 = 6211 (W) · 2230 - 246 = 1984 (D) · 7901 - 4020 = 3881 (E) · 11118 - 4204 = 6914 (P) · 11922 - 4251 = 7671 (A)

Clue 4 (Rounding): "WE FOUND SCRATCHED IRON PIECES"

Round 3,197 to the nearest thousand = 3000 (W) · Round 742 to the nearest hundred = 700 (E) · Round 74 to the nearest ten = 70 (H) · Round 93 to the nearest ten = 90 (N) · Round 2,312 to the nearest hundred = 2300 (F) · Round 9,217 to the nearest thousand = 9000 (D) · Round 31 to the nearest ten = 30 (T) · Round 368 to the nearest ten = 370 (I) · Round 3,707 to the nearest hundred = 3700 (R) · Round 174 to the nearest ten = 170 (U) · Round 6,953 to the nearest thousand = 7000 (S) · Round 473 to the nearest hundred = 500 (P) · Round 226 to the nearest ten = 230 (C) · Round 21 to the nearest ten = 20 (A) · Round 2,490 to the nearest thousand = 2000 (O)

Clue 5 (Missing addends): surviving statement is box 2 → Steve

16 + ___ = 19 = 3 · 31 + ___ = 38 = 7 · 11 + ___ = 19 = 8 · 29 + ___ = 35 = 6 · 26 + ___ = 35 = 9 · 40 + ___ = 44 = 4 · 10 + ___ = 20 = 10 · 11 + ___ = 16 = 5 · 30 + ___ = 31 = 1 · 34 + ___ = 46 = 12 · 18 + ___ = 29 = 11