



The Broken Block Mystery

Grade 4 math · Multiplication, Rounding, Addition, Subtraction, Division · Reading level grades 1-2

Detective: _____ **Date:** _____

Someone broke the grand diamond monument in Pixel Hills! The Chief Builder needs your help to find the sneaky Griefer.

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	MAIN TOOL	BLOCK ARMOR	LEFTOVER BLOCK	HAIR COLOR	SCARES THEM
Bad	diamond pickaxe	glowstone crown	gravel dust	blue hair	water bucket
Gem	enchanted bow	redstone vest	gravel dust	blue hair	wolf bark
Skeppy	diamond pickaxe	slime helmet	dirt trail	blue hair	wolf bark
Tubbo	diamond pickaxe	redstone vest	dirt trail	blue hair	water bucket
Sparklez	diamond pickaxe	slime helmet	dirt trail	blue hair	tame ocelot
George	iron axe	redstone vest	gravel dust	blue hair	wolf bark
Alex	iron axe	glowstone crown	gravel dust	blue hair	wolf bark
Stampy	netherite sword	glowstone crown	dirt trail	pink hair	water bucket
Dream	enchanted bow	obsidian boots	dirt trail	blue hair	wolf bark
Dan	diamond pickaxe	slime helmet	gravel dust	pink hair	water bucket
Pete	golden shovel	slime helmet	gravel dust	blue hair	wolf bark
Sapnap	golden shovel	slime helmet	gravel dust	pink hair	tame ocelot
Phil	diamond pickaxe	redstone vest	gravel dust	green hair	wolf bark
Techno	enchanted bow	slime helmet	gravel dust	green hair	wolf bark
Wilbur	golden shovel	redstone vest	dirt trail	green hair	wolf bark
Shubble	iron axe	slime helmet	dirt trail	pink hair	wolf bark
Joel	golden shovel	ice pants	dirt trail	blue hair	wolf bark
Scott	iron axe	obsidian boots	dirt trail	blue hair	tame ocelot
Steve	iron axe	ice pants	dirt trail	green hair	water bucket
Lizzie	enchanted bow	ice pants	gravel dust	blue hair	tame ocelot
Mumbo	netherite sword	redstone vest	gravel dust	blue hair	wolf bark

CLUE 1

Multiplication facts (1-12)

We find some chests. They sit in equal rows. Let us multiply to find the total items.

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

T																T		
121	32	64	14	108	9	64	1	64	108	11	70	64	81	84	70	121		
										T								
63	64	54	108	54	14	72	70	63	81	121	70	84	64	96	108	70	63	84

$11 \times 11 = \square \rightarrow$ T	$10 \times 7 = \square \rightarrow$ O	$9 \times 6 = \square \rightarrow$ A	
$1 \times 11 = \square \rightarrow$ D	$2 \times 7 = \square \rightarrow$ G	$1 \times 1 = \square \rightarrow$ F	$9 \times 9 = \square \rightarrow$ S
$12 \times 8 = \square \rightarrow$ C	$7 \times 9 = \square \rightarrow$ W	$12 \times 7 = \square \rightarrow$ N	
$8 \times 8 = \square \rightarrow$ E	$1 \times 9 = \square \rightarrow$ I	$12 \times 9 = \square \rightarrow$ R	$8 \times 4 = \square \rightarrow$ H
$8 \times 9 = \square \rightarrow$ L			

Scratch space:

CLUE 2 Rounding

Our block scanner is old. It only shows rounded numbers. Round the distance to get a clue.

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

T																
4300	7000	3000	9000	90	3000	1700	5000	200	900	500	2900	2900	1700	500	90	
																T
50	1300	3700	1100	1100	3000	50	700	1300	1700	900	3000	2900	50	30	9000	4300

Round 4,326 to the nearest hundred → **T**

Round 156 to the nearest hundred → **Y**

Round 34 to the nearest ten → **U**

Round 459 to the nearest hundred → **I**

Round 1,073 to the nearest hundred → **P**

Round 8,804 to the nearest thousand → **S**

Round 53 to the nearest ten → **D**

Round 6,749 to the nearest thousand → **H**

Round 4,573 to the nearest thousand → **K**

Round 2,798 to the nearest thousand → **E**

Round 673 to the nearest hundred → **G**

Round 89 to the nearest ten → **N**

Round 1,336 to the nearest hundred → **R**

Round 3,689 to the nearest hundred → **O**

Round 2,872 to the nearest hundred → **L**

Round 1,673 to the nearest hundred → **A**

Round 916 to the nearest hundred → **V**

Scratch space:

CLUE 3 Addition

Let us add up all the redstone dust we found. The sum will lead us to the next hint.

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

A 6056	9369	3194	6815	5396	6685	3194	9369	8361	5825	A 6056	2398	4130	6685	7204	9369	9369
9834	2287	A 6056	2398	3207	6583	4245	7204	9834	8149	2398	7204	3207	8361	3207	2398	

$1915 + 4141 = \boxed{} \rightarrow \boxed{\text{A}}$

$5442 + 4392 = \boxed{} \rightarrow \boxed{\text{S}}$

$3025 + 3558 = \boxed{} \rightarrow \boxed{\text{T}}$

$3011 + 4193 = \boxed{} \rightarrow \boxed{\text{I}}$

$4990 + 3371 = \boxed{} \rightarrow \boxed{\text{F}}$

$2629 + 1616 = \boxed{} \rightarrow \boxed{\text{H}}$

$4647 + 3502 = \boxed{} \rightarrow \boxed{\text{G}}$

$1087 + 1311 = \boxed{} \rightarrow \boxed{\text{R}}$

$4874 + 4495 = \boxed{} \rightarrow \boxed{\text{L}}$

$2151 + 3674 = \boxed{} \rightarrow \boxed{\text{B}}$

$795 + 1492 = \boxed{} \rightarrow \boxed{\text{C}}$

$2902 + 3913 = \boxed{} \rightarrow \boxed{\text{U}}$

$3551 + 1845 = \boxed{} \rightarrow \boxed{\text{D}}$

$1827 + 1367 = \boxed{} \rightarrow \boxed{\text{O}}$

$1447 + 2683 = \boxed{} \rightarrow \boxed{\text{K}}$

$1219 + 1988 = \boxed{} \rightarrow \boxed{\text{E}}$

$3237 + 3448 = \boxed{} \rightarrow \boxed{\text{W}}$

Scratch space:

CLUE 4
Subtraction

Some blocks were stolen. We must subtract the missing blocks to see what is left.

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

T																
6362	8574	7633	5154	1529	6765	6765	5193	1529	3687	8574	5193	1947	7164	6765	7022	7633

7164	6765	1872	2871	6883	2311	8574	5193	1529	1481

$11169 - 4807 = \square \rightarrow \text{[T]}$

$5028 - 3081 = \square \rightarrow \text{[S]}$

$11669 - 4036 = \square \rightarrow \text{[E]}$

$9210 - 2188 = \square \rightarrow \text{[U]}$

$9890 - 1316 = \square \rightarrow \text{[H]}$

$7608 - 843 = \square \rightarrow \text{[L]}$

$7806 - 923 = \square \rightarrow \text{[K]}$

$3242 - 1370 = \square \rightarrow \text{[O]}$

$5930 - 776 = \square \rightarrow \text{[V]}$

$7577 - 3890 = \square \rightarrow \text{[N]}$

$1983 - 454 = \square \rightarrow \text{[I]}$

$6010 - 3139 = \square \rightarrow \text{[C]}$

$6701 - 1508 = \square \rightarrow \text{[A]}$

$10827 - 3663 = \square \rightarrow \text{[B]}$

$5003 - 2692 = \square \rightarrow \text{[Y]}$

$3971 - 2490 = \square \rightarrow \text{[R]}$

Scratch space:

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

We must share these golden apples equally. Let us divide them up to get the final clue.

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:

$77 \div 7 = \boxed{}$

$2 \div 1 = \boxed{}$

$28 \div 7 = \boxed{}$

$72 \div 8 = \boxed{}$

$30 \div 10 = \boxed{}$

$24 \div 3 = \boxed{}$

$63 \div 9 = \boxed{}$

$24 \div 4 = \boxed{}$

$2 \div 2 = \boxed{}$

$50 \div 5 = \boxed{}$

$10 \div 2 = \boxed{}$

Step 2 - cross out the sentence with each answer:

1. The villain chops down the giant trees, then runs fast in heavy obsidian boots.
2. The villain swings a sharp sword, then powers up with a redstone vest.
3. The villain scoops up the path, then slides on cold ice pants.
4. The villain scoops up the path, then bounces away on green slime boots.
5. The villain scoops up the path, then powers up with a redstone vest.
6. The villain digs a deep tunnel, then bounces away on green slime boots.
7. The villain digs a deep tunnel, then slides on cold ice pants.
8. The villain digs a deep tunnel, then glows brightly in a glowstone crown.
9. The villain swings a sharp sword, then glows brightly in a glowstone crown.
10. The villain swings a sharp sword, then runs fast in heavy obsidian boots.
11. The villain chops down the giant trees, then powers up with a redstone vest.
12. The villain shoots a trick arrow, then powers up with a redstone vest.

Answer Key

The Broken Block Mystery

Culprit: Gem

enchanted bow · redstone vest · gravel dust · blue hair · wolf bark

Trail: Start 21 → Clue 1 18 → Clue 2 9 → Clue 3 6 → Clue 4 4 → Clue 5 1

Clue 1 (Multiplication facts (1-12)): "THE GRIEFER DOES NOT WEAR A GLOWSTONE CROWN"

$11 \times 11 = 121$ (T) · $10 \times 7 = 70$ (O) · $9 \times 6 = 54$ (A) · $1 \times 11 = 11$ (D) · $2 \times 7 = 14$ (G) · $1 \times 1 = 1$ (F) · $9 \times 9 = 81$ (S) · $12 \times 8 = 96$ (C) · $7 \times 9 = 63$ (W) · $12 \times 7 = 84$ (N) · $8 \times 8 = 64$ (E) · $1 \times 9 = 9$ (I) · $12 \times 9 = 108$ (R) · $8 \times 4 = 32$ (H) · $8 \times 9 = 72$ (L)

Clue 2 (Rounding): "THE SNEAKY VILLAIN DROPPED GRAVEL DUST"

Round 4,326 to the nearest hundred = 4300 (T) · Round 156 to the nearest hundred = 200 (Y) · Round 34 to the nearest ten = 30 (U) · Round 459 to the nearest hundred = 500 (I) · Round 1,073 to the nearest hundred = 1100 (P) · Round 8,804 to the nearest thousand = 9000 (S) · Round 53 to the nearest ten = 50 (D) · Round 6,749 to the nearest thousand = 7000 (H) · Round 4,573 to the nearest thousand = 5000 (K) · Round 2,798 to the nearest thousand = 3000 (E) · Round 673 to the nearest hundred = 700 (G) · Round 89 to the nearest ten = 90 (N) · Round 1,336 to the nearest hundred = 1300 (R) · Round 3,689 to the nearest hundred = 3700 (O) · Round 2,872 to the nearest hundred = 2900 (L) · Round 1,673 to the nearest hundred = 1700 (A) · Round 916 to the nearest hundred = 900 (V)

Clue 3 (Addition): "A LOUD WOLF BARK WILL SCARE THIS GRIEFER"

$1915 + 4141 = 6056$ (A) · $5442 + 4392 = 9834$ (S) · $3025 + 3558 = 6583$ (T) · $3011 + 4193 = 7204$ (I) · $4990 + 3371 = 8361$ (F) · $2629 + 1616 = 4245$ (H) · $4647 + 3502 = 8149$ (G) · $1087 + 1311 = 2398$ (R) · $4874 + 4495 = 9369$ (L) · $2151 + 3674 = 5825$ (B) · $795 + 1492 = 2287$ (C) · $2902 + 3913 = 6815$ (U) · $3551 + 1845 = 5396$ (D) · $1827 + 1367 = 3194$ (O) · $1447 + 2683 = 4130$ (K) · $1219 + 1988 = 3207$ (E) · $3237 + 3448 = 6685$ (W)

Clue 4 (Subtraction): "THE VILLAIN HAS BLUE BLOCKY HAIR"

$11169 - 4807 = 6362$ (T) · $5028 - 3081 = 1947$ (S) · $11669 - 4036 = 7633$ (E) · $9210 - 2188 = 7022$ (U) · $9890 - 1316 = 8574$ (H) · $7608 - 843 = 6765$ (L) · $7806 - 923 = 6883$ (K) · $3242 - 1370 = 1872$ (O) · $5930 - 776 = 5154$ (V) · $7577 - 3890 = 3687$ (N) · $1983 - 454 = 1529$ (I) · $6010 - 3139 = 2871$ (C) · $6701 - 1508 = 5193$ (A) · $10827 - 3663 = 7164$ (B) · $5003 - 2692 = 2311$ (Y) · $3971 - 2490 = 1481$ (R)

Clue 5 (Division facts (1-12)): surviving statement is box 12 → Gem

$77 \div 7 = 11$ · $2 \div 1 = 2$ · $28 \div 7 = 4$ · $72 \div 8 = 9$ · $30 \div 10 = 3$ · $24 \div 3 = 8$ · $63 \div 9 = 7$ · $24 \div 4 = 6$ · $2 \div 2 = 1$ · $50 \div 5 = 10$ · $10 \div 2 = 5$