



The Great Block Theft

Grade 7 math · Place value, Rounding, Skip counting, Bar models, Division · Reading level grades 5-6

Detective: _____ Date: _____

Someone has grieved the Server Admin's giant golden temple! They stole the legendary Dragon Egg and left a trail of redstone dust. We need to analyze the clues and find the block-breaker.

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	BUFF POTION	HANDEDNESS	SKINS HAIR COLOR	DEFENSIVE TRICK
Hermit	ender pearl	strength brew	left handed	brown hair	splash water
Technoblade	diamond sword	invisibility	right handed	green hair	soul sand
Ranboo	tnt block	invisibility	right handed	brown hair	splash water
CaptainSparklez	diamond sword	invisibility	right handed	blue hair	lava bucket
Antfrost	elytra wings	invisibility	left handed	green hair	splash water
Philza	netherite pickaxe	healing potion	right handed	green hair	splash water
Dream	ender pearl	fire resistance	left handed	blue hair	splash water
Sapnap	elytra wings	speed splash	right handed	brown hair	soul sand
TommyInnit	netherite pickaxe	speed splash	right handed	green hair	soul sand
Tubbo	diamond sword	speed splash	right handed	green hair	soul sand
LDShadowLady	netherite pickaxe	strength brew	right handed	green hair	lava bucket
Alex	tnt block	invisibility	left handed	blue hair	lava bucket
Grian	ender pearl	speed splash	right handed	green hair	soul sand
Ethoslab	tnt block	strength brew	left handed	brown hair	lava bucket
BadBoyHalo	ender pearl	invisibility	left handed	brown hair	lava bucket
CaptainPuffy	elytra wings	speed splash	right handed	green hair	soul sand
Crafty	ender pearl	healing potion	right handed	brown hair	soul sand
MumboJumbo	tnt block	invisibility	left handed	green hair	lava bucket
Skeppy	ender pearl	strength brew	left handed	green hair	soul sand
GeorgeNotFound	tnt block	strength brew	right handed	blue hair	splash water
Steve	diamond sword	strength brew	right handed	brown hair	soul sand

CLUE 1 Place value

We examine the server coordinate logs. The digit in the tens place of the block ID tells us exactly where the griever went.

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

T			T					T							T			
5000	500	4000	5000	200	1000	10	4000	5000	2000	900	4000	40	700	900	5000	60	40	4000
9000	700	20	9000	40	9000	50	9000	8000	9000	5000	800							

What is the value of the 5 in 725,029? → **T**

What is the value of the 2 in 18,528? → **V**

What is the value of the 6 in 43,563? → **U**

What is the value of the 5 in 231,054? → **B**

What is the value of the 8 in 92,855? → **Y**

What is the value of the 2 in 95,289? → **A**

What is the value of the 4 in 256,843? → **S**

What is the value of the 4 in 934,151? → **E**

What is the value of the 8 in 198,252? → **L**

What is the value of the 1 in 301,245? → **R**

What is the value of the 5 in 77,536? → **H**

What is the value of the 2 in 62,454? → **D**

What is the value of the 7 in 64,746? → **N**

What is the value of the 9 in 119,115? → **I**

What is the value of the 1 in 87,315? → **G**

What is the value of the 9 in 702,935? → **O**

Scratch space:

CLUE 2 Rounding

Our redstone signal radar is glitching. It only shows rounded whole numbers of blocks to the nearest ten.

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

T									T								T	
2900	430	20	130	700	130	4300	20	230	2900	2000	130	9000	1300	3700	70	1300	2900	3700

					T							
5000	20	90	2000	900	430	2900	430	1100	1300	300	20	300

Round 2,927 to the nearest hundred → **T**

Round 3,730 to the nearest hundred → **O**

Round 230 to the nearest ten → **C**

Round 2,265 to the nearest thousand → **I**

Round 4,307 to the nearest hundred → **P**

Round 134 to the nearest ten → **S**

Round 72 to the nearest ten → **W**

Round 94 to the nearest ten → **R**

Round 8,505 to the nearest thousand → **K**

Round 4,708 to the nearest thousand → **B**

Round 1,326 to the nearest hundred → **N**

Round 703 to the nearest hundred → **U**

Round 260 to the nearest hundred → **D**

Round 22 to the nearest ten → **E**

Round 859 to the nearest hundred → **G**

Round 427 to the nearest ten → **H**

Round 1,086 to the nearest hundred → **A**

Scratch space:

CLUE 3 Skip counting

The griever jumped across pressure plates. We count the blocks they skipped in equal steps to find their path.

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

T																	
60	80	21	21	45	21	24	14	22	60	15	24	33	70	21	110	90	45

22	42	15	70	22	9	45	110

Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, __, 70, 80 → **T**

Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, 21, 24, 27, 30, __, 36, 39 → **B**

Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, 60, __, 80, 90 → **L**

Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, 60, 70, 80, __, 100, 110 → **I**

Skip-count by 2s. Fill the blank: 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, __, 24, 26 → **S**

Skip-count by 5s. Fill the blank: 5, 10, 15, 20, 25, 30, 35, 40, __, 50, 55 → **N**

Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, __, 24, 27 → **E**

Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, 60, 70, 80, 90, 100, __, 120, 130 → **D**

Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, 21, 24, 27, 30, 33, 36, 39, __, 45, 48 → **O**

Skip-count by 3s. Fill the blank: 3, 6, __, 12, 15 → **A**

Skip-count by 5s. Fill the blank: 5, 10, __, 20, 25 → **U**

Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, 21, __, 27, 30 → **M**

Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, 60, 70, __, 90, 100 → **H**

Skip-count by 2s. Fill the blank: 2, 4, 6, 8, 10, 12, __, 16, 18 →

Scratch space:

CLUE 4

Bar model word problems

We map out the stolen blocks using a bar model to compare the weight of iron ore versus gold blocks.

Draw a bar model to solve each word problem, then write its letter in the boxes to fill in the missing word.

A strand of

G								
58	22	76	76	92	23	52	118	22

 hair turned up at the scene.

There were 94 emerald blocks in all. 36 emerald blocks were used. How many emerald blocks are left?

draw a bar model

Answer: → **G**

There were 46 emerald blocks in all. 24 emerald blocks were used. How many emerald blocks are left?

draw a bar model

Answer: → **R**

Steve the builder shares 208 emerald blocks equally among 4 teams. How many emerald blocks does each team get?

draw a bar model

Answer: → **A**

Steve the builder shares 92 diamonds equally among 4 teams. How many diamonds does each team get?

draw a bar model

Answer: → **H**

One group collected 19 emerald blocks and another group collected 57 emerald blocks. How many emerald blocks in all?

draw a bar model

Answer: → **E**

There were 123 diamonds in all. 31 diamonds were used. How many diamonds are left?

draw a bar model

Answer: → **N**

One group collected 116 golden apples and another group collected 2 golden apples. How many golden apples in all?

draw a bar model

Answer: → **I**

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

To hide their track, the griever divided their stolen stack of sixty four diamonds equally among secret chests.

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:

$72 \div 9 = \boxed{}$

$5 \div 1 = \boxed{}$

$36 \div 4 = \boxed{}$

$36 \div 3 = \boxed{}$

$20 \div 2 = \boxed{}$

$3 \div 1 = \boxed{}$

$44 \div 4 = \boxed{}$

$63 \div 9 = \boxed{}$

$42 \div 7 = \boxed{}$

$28 \div 7 = \boxed{}$

$4 \div 2 = \boxed{}$

Step 2 - cross out the sentence with each answer:

1. The villain swings a netherite pickaxe, then throws a speed splash.
2. The villain lights a tnt block, then gains fire resistance.
3. The villain lights a tnt block, then gulps strength brew.
4. The villain swings a diamond sword, then drinks a healing potion.
5. The villain swings a diamond sword, then throws a speed splash.
6. The villain throws an ender pearl, then drinks invisibility brew.
7. The villain swings a diamond sword, then gains fire resistance.
8. The villain glides on elytra wings, then throws a speed splash.
9. The villain throws an ender pearl, then throws a speed splash.
10. The villain swings a diamond sword, then drinks invisibility brew.
11. The villain swings a diamond sword, then gulps strength brew.
12. The villain throws an ender pearl, then gains fire resistance.

Answer Key

The Great Block Theft

Culprit: TommyInnit

netherite pickaxe · speed splash · right handed · green hair · soul sand

Trail: Start 21 → Clue 1 14 → Clue 2 10 → Clue 3 7 → Clue 4 4 → Clue 5 1

Clue 1 (Place value): "THE TARGET DOES NOT USE INVISIBILITY"

What is the value of the 5 in 725,029? = 5000 (T) · What is the value of the 2 in 18,528? = 20 (V) · What is the value of the 6 in 43,563? = 60 (U) · What is the value of the 5 in 231,054? = 50 (B) · What is the value of the 8 in 92,855? = 800 (Y) · What is the value of the 2 in 95,289? = 200 (A) · What is the value of the 4 in 256,843? = 40 (S) · What is the value of the 4 in 934,151? = 4000 (E) · What is the value of the 8 in 198,252? = 8000 (L) · What is the value of the 1 in 301,245? = 1000 (R) · What is the value of the 5 in 77,536? = 500 (H) · What is the value of the 2 in 62,454? = 2000 (D) · What is the value of the 7 in 64,746? = 700 (N) · What is the value of the 9 in 119,115? = 9000 (I) · What is the value of the 1 in 87,315? = 10 (G) · What is the value of the 9 in 702,935? = 900 (O)

Clue 2 (Rounding): "THE SUSPECT IS KNOWN TO BE RIGHT HANDED"

Round 2,927 to the nearest hundred = 2900 (T) · Round 3,730 to the nearest hundred = 3700 (O) · Round 230 to the nearest ten = 230 (C) · Round 2,265 to the nearest thousand = 2000 (I) · Round 4,307 to the nearest hundred = 4300 (P) · Round 134 to the nearest ten = 130 (S) · Round 72 to the nearest ten = 70 (W) · Round 94 to the nearest ten = 90 (R) · Round 8,505 to the nearest thousand = 9000 (K) · Round 4,708 to the nearest thousand = 5000 (B) · Round 1,326 to the nearest hundred = 1300 (N) · Round 703 to the nearest hundred = 700 (U) · Round 260 to the nearest hundred = 300 (D) · Round 22 to the nearest ten = 20 (E) · Round 859 to the nearest hundred = 900 (G) · Round 427 to the nearest ten = 430 (H) · Round 1,086 to the nearest hundred = 1100 (A)

Clue 3 (Skip counting): "THE ENEMY STUMBLED IN SOUL SAND"

Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, __, 70, 80 = 60 (T) · Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, 21, 24, 27, 30, __, 36, 39 = 33 (B) · Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, 60, __, 80, 90 = 70 (L) · Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, 60, 70, 80, __, 100, 110 = 90 (I) · Skip-count by 2s. Fill the blank: 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, __, 24, 26 = 22 (S) · Skip-count by 5s. Fill the blank: 5, 10, 15, 20, 25, 30, 35, 40, __, 50, 55 = 45 (N) · Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, __, 24, 27 = 21 (E) · Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, 60, 70, 80, 90, 100, __, 120, 130 = 110 (D) · Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, 21, 24, 27, 30, 33, 36, 39, __, 45, 48 = 42 (O) · Skip-count by 3s. Fill the blank: 3, 6, __, 12, 15 = 9 (A) · Skip-count by 5s. Fill the blank: 5, 10, __, 20, 25 = 15 (U) · Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, 21, __, 27, 30 = 24 (M) · Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, 60, 70, __, 90, 100 = 80 (H) · Skip-count by 2s. Fill the blank: 2, 4, 6, 8, 10, 12, __, 16, 18 = 14 (Y)

Clue 4 (Bar model word problems): "GREEN HAIR"

There were 94 emerald blocks in all. 36 emerald blocks were used. How many emerald blocks are left? = 58 (G) · There were 46 emerald blocks in all. 24 emerald blocks were used. How many emerald blocks are left? = 22 (R) · Steve the builder shares 208 emerald blocks equally among 4 teams. How many emerald blocks does each team get? = 52 (A) · Steve the builder shares 92 diamonds equally among 4 teams. How many diamonds does each team get? = 23 (H) · One group collected 19 emerald blocks and another group collected 57 emerald blocks. How many emerald blocks in all? = 76 (E) · There were 123 diamonds in all. 31 diamonds were used. How many diamonds are left? = 92 (N) · One group collected 116 golden apples and another group collected 2 golden apples. How many golden apples in all? = 118 (I)

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

$72 \div 9 = 8$ · $5 \div 1 = 5$ · $36 \div 4 = 9$ · $36 \div 3 = 12$ · $20 \div 2 = 10$ · $3 \div 1 = 3$ · $44 \div 4 = 11$ · $63 \div 9 = 7$ · $42 \div 7 = 6$ · $28 \div 7 = 4$ · $4 \div 2 = 2$