



The Case of the Missing Golden Pickaxe

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

Detective: _____ **Date:** _____

Someone snuck into the Master Builder vault and looted the Golden Pickaxe! Solve the block mysteries to uncover the culprit.

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 Rogue 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	CRAFTED GEAR	SHIELD HAND	HELMET COLOR	BAIT ITEM
Redstone Rita	Diamond Sword	TNT Block	Left Hand Shield	Gold Yellow	Water Bucket
Stampy	Trident	TNT Block	Right Hand Shield	Gold Yellow	Splash Potion
Alex	Diamond Sword	Lava Bucket	Right Hand Shield	Gold Yellow	Splash Potion
Flint Felix	Trident	Lava Bucket	Left Hand Shield	Gold Yellow	Sweet Berry
Cobble Cole	Redstone Wand	Glider Wings	Left Hand Shield	Gold Yellow	Splash Potion
Dan	Bow and Arrow	Lava Bucket	Right Hand Shield	Leather Brown	Water Bucket
Aphmau	Trident	Glider Wings	Left Hand Shield	Gold Yellow	Water Bucket
Steve	Diamond Sword	TNT Block	Right Hand Shield	Iron Silver	Splash Potion
Digging Dan	Bow and Arrow	Ender Chest	Right Hand Shield	Gold Yellow	Water Bucket
Ender Emma	Netherite Axe	Glider Wings	Left Hand Shield	Gold Yellow	Splash Potion
Hermit Sam	Redstone Wand	Ender Chest	Right Hand Shield	Gold Yellow	Splash Potion
Preston	Bow and Arrow	Lava Bucket	Right Hand Shield	Leather Brown	Sweet Berry
Axe Ava	Redstone Wand	TNT Block	Left Hand Shield	Gold Yellow	Sweet Berry
Blocky Bob	Bow and Arrow	Ender Chest	Right Hand Shield	Gold Yellow	Splash Potion
Nether Ned	Bow and Arrow	Glider Wings	Right Hand Shield	Gold Yellow	Sweet Berry
Crafter Jack	Trident	Glider Wings	Left Hand Shield	Gold Yellow	Splash Potion
Cube Cody	Diamond Sword	Ender Chest	Left Hand Shield	Iron Silver	Splash Potion
Mason Max	Netherite Axe	Golden Apple	Right Hand Shield	Iron Silver	Splash Potion
Miner Mark	Trident	Glider Wings	Right Hand Shield	Gold Yellow	Splash Potion
Gravel Grace	Trident	Golden Apple	Right Hand Shield	Gold Yellow	Sweet Berry
Builder Bea	Redstone Wand	Ender Chest	Right Hand Shield	Leather Brown	Sweet Berry

CLUE 1 Place value

You check the digit displays on the vault redstone lock.

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

T																T
60	7000	6000	80	700	800	800	500	700	300	4000	30	6000	40	300	30	60

																T
50	40	6000	500	800	500	80	500	1000	50	5000	900	6000	60			

What is the value of the 6 in 9,568? →

T

What is the value of the 7 in 27,183? →

H

What is the value of the 3 in 8,234? →

O

What is the value of the 7 in 9,750? →

I

What is the value of the 5 in 1,056? →

U

What is the value of the 8 in 480? →

V

What is the value of the 1 in 31,398? →

B

What is the value of the 8 in 839? →

L

What is the value of the 9 in 966? →

K

What is the value of the 5 in 1,509? →

A

What is the value of the 3 in 1,368? →

N

What is the value of the 4 in 4,118? →

D

What is the value of the 5 in 95,294? →

C

What is the value of the 6 in 46,722? →

E

What is the value of the 4 in 8,749? →

S

Scratch space:

Addition

You combine the block counts from both damaged watchtowers.

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























7109 2598 4736 4233 7085 2377 5811 4736 2598 4736 6677 6919 8741 4233 6056 2377 2598 7109












2598 8741 2738 6919 8224 2598 6056 4736 6677 6919

$$2336 + 4773 = \boxed{} \rightarrow \boxed{\mathbf{T}}$$

$$3628 + 4596 = \boxed{} \rightarrow \boxed{\text{S}}$$

$1195 + 1182 = \boxed{} \rightarrow \boxed{\mathbf{G}}$

$$1059 + 1679 = \boxed{} \rightarrow \boxed{\text{N}}$$

$$4432 + 4309 = \boxed{} \rightarrow \boxed{\mathbf{A}}$$

$$2892 + 4027 = \boxed{} \rightarrow \boxed{\mathbf{D}}$$

$$3908 + 2148 = \boxed{} \rightarrow \boxed{}$$

$$2775 + 1961 = \boxed{} \rightarrow \boxed{\text{E}}$$

$$4140 + 2945 = \boxed{} \rightarrow \boxed{\mathbf{0}}$$

$$4617 + 2060 = \boxed{} \rightarrow \boxed{\text{L}}$$

$$1550 + 1048 = \boxed{} \rightarrow \boxed{\text{H}}$$

$$1717 + 2516 = \boxed{} \rightarrow \boxed{\text{R}}$$

$$2646 + 3165 = \boxed{} \rightarrow \boxed{\text{U}}$$

Scratch space:

CLUE 3
Subtraction

You calculate how many emeralds were taken from the chest.

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

T									T								
2627	8882	5421	7877	4025	3817	8876	8864	2627	3092	2427	2427	5421	8864	3817			
								T				T		T			
2427	6747	5585	3817	2427	8882	6747	3092	2627	6101	3092	8435	2627	3092	2427	2627	3092	6747
T																	
2627	8882	5421	8316														

5013 - 2386 = → T	8443 - 8 = → N	7355 - 4928 = → S
5496 - 2404 = → O	12594 - 4278 = → M	10105 - 2228 = → G
8130 - 2709 = → E	7894 - 1147 = → P	8691 - 2590 = → I
10721 - 1857 = → D	5829 - 2012 = → A	5857 - 1832 = → U
7187 - 1602 = → L	9200 - 324 = → R	11052 - 2170 = → H

Scratch space:

CLUE 4

Rounding

The spyglass distance gauge rounds numbers to the nearest hundred.

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

G															
2000	2300	130	70	500	300	130	130	2300	5000	4300	300	130	20	300	230

1700	4300	50	9000	70	1700	5000	300	9000	300	3700	2300	900	430	70

Round 1,696 to the nearest thousand

→ **G**

Round 9,173 to the nearest thousand

→ **R**

Round 72 to the nearest ten

→ **D**

Round 2,303 to the nearest hundred

→ **O**

Round 21 to the nearest ten

→ **M**

Round 431 to the nearest ten

→ **N**

Round 277 to the nearest hundred

→ **E**

Round 1,657 to the nearest hundred

→ **S**

Round 4,285 to the nearest hundred

→ **H**

Round 3,672 to the nearest hundred

→ **F**

Round 935 to the nearest hundred

→ **U**

Round 49 to the nearest ten

→ **A**

Round 229 to the nearest ten

→ **T**

Round 134 to the nearest ten

→ **L**

Round 539 to the nearest hundred

→ **Y**

Round 4,996 to the nearest thousand

→ **W**

Scratch space:

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

You split the recovered minecart tracks into equal piles.

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:

$66 \div 11 = \boxed{}$

$32 \div 4 = \boxed{}$

$9 \div 9 = \boxed{}$

$40 \div 10 = \boxed{}$

$60 \div 12 = \boxed{}$

$100 \div 10 = \boxed{}$

$48 \div 4 = \boxed{}$

$30 \div 10 = \boxed{}$

$49 \div 7 = \boxed{}$

$88 \div 8 = \boxed{}$

$63 \div 7 = \boxed{}$

Step 2 - cross out the sentence with each answer:

1. The villain waved a redstone wand, then stashed loot in an ender chest.
2. The villain threw a trident, then escaped with glider wings.
3. The villain chopped with a netherite axe, then spilled a lava bucket.
4. The villain swung a diamond sword, then stashed loot in an ender chest.
5. The villain threw a trident, then spilled a lava bucket.
6. The villain shot a bow and arrow, then stashed loot in an ender chest.
7. The villain waved a redstone wand, then ate a golden apple.
8. The villain threw a trident, then lit a tnt block.
9. The villain swung a diamond sword, then lit a tnt block.
10. The villain chopped with a netherite axe, then escaped with glider wings.
11. The villain shot a bow and arrow, then lit a tnt block.
12. The villain swung a diamond sword, then spilled a lava bucket.

Answer Key

The Case of the Missing Golden Pickaxe

Culprit: Miner Mark

Trident · Glider Wings · Right Hand Shield · Gold Yellow · Splash Potion

Trail: Start 21 → Clue 1 17 → Clue 2 10 → Clue 3 6 → Clue 4 4 → Clue 5 1

Clue 1 (Place value): "THE VILLAIN DOES NOT USE A LAVA BUCKET"

What is the value of the 6 in 9,568? = 60 (T) · What is the value of the 7 in 27,183? = 7000 (H) · What is the value of the 3 in 8,234? = 30 (O) · What is the value of the 7 in 9,750? = 700 (I) · What is the value of the 5 in 1,056? = 50 (U) · What is the value of the 8 in 480? = 80 (V) · What is the value of the 1 in 31,398? = 1000 (B) · What is the value of the 8 in 839? = 800 (L) · What is the value of the 9 in 966? = 900 (K) · What is the value of the 5 in 1,509? = 500 (A) · What is the value of the 3 in 1,368? = 300 (N) · What is the value of the 4 in 4,118? = 4000 (D) · What is the value of the 5 in 95,294? = 5000 (C) · What is the value of the 6 in 46,722? = 6000 (E) · What is the value of the 4 in 8,749? = 40 (S)

Clue 2 (Addition): "THE ROGUE HELD A RIGHT HAND SHIELD"

$2336 + 4773 = 7109$ (T) · $3628 + 4596 = 8224$ (S) · $1195 + 1182 = 2377$ (G) · $1059 + 1679 = 2738$ (N) · $4432 + 4309 = 8741$ (A) · $2892 + 4027 = 6919$ (D) · $3908 + 2148 = 6056$ (I) · $2775 + 1961 = 4736$ (E) · $4140 + 2945 = 7085$ (O) · $4617 + 2060 = 6677$ (L) · $1550 + 1048 = 2598$ (H) · $1717 + 2516 = 4233$ (R) · $2646 + 3165 = 5811$ (U)

Clue 3 (Subtraction): "THE GUARD TOSSED A SPLASH POTION TO STOP THEM"

$5013 - 2386 = 2627$ (T) · $8443 - 8 = 8435$ (N) · $7355 - 4928 = 2427$ (S) · $5496 - 2404 = 3092$ (O) · $12594 - 4278 = 8316$ (M) · $10105 - 2228 = 7877$ (G) · $8130 - 2709 = 5421$ (E) · $7894 - 1147 = 6747$ (P) · $8691 - 2590 = 6101$ (I) · $10721 - 1857 = 8864$ (D) · $5829 - 2012 = 3817$ (A) · $5857 - 1832 = 4025$ (U) · $7187 - 1602 = 5585$ (L) · $9200 - 324 = 8876$ (R) · $11052 - 2170 = 8882$ (H)

Clue 4 (Rounding): "GOLD YELLOW HELMET SHARDS WERE FOUND"

Round 1,696 to the nearest thousand = 2000 (G) · Round 9,173 to the nearest thousand = 9000 (R) · Round 72 to the nearest ten = 70 (D) · Round 2,303 to the nearest hundred = 2300 (O) · Round 21 to the nearest ten = 20 (M) · Round 431 to the nearest ten = 430 (N) · Round 277 to the nearest hundred = 300 (E) · Round 1,657 to the nearest hundred = 1700 (S) · Round 4,285 to the nearest hundred = 4300 (H) · Round 3,672 to the nearest hundred = 3700 (F) · Round 935 to the nearest hundred = 900 (U) · Round 49 to the nearest ten = 50 (A) · Round 229 to the nearest ten = 230 (T) · Round 134 to the nearest ten = 130 (L) · Round 539 to the nearest hundred = 500 (Y) · Round 4,996 to the nearest thousand = 5000 (W)

Clue 5 (Division facts (1-12)): surviving statement is box 2 → Miner Mark

$66 \div 11 = 6$ · $32 \div 4 = 8$ · $9 \div 9 = 1$ · $40 \div 10 = 4$ · $60 \div 12 = 5$ · $100 \div 10 = 10$ · $48 \div 4 = 12$ · $30 \div 10 = 3$ · $49 \div 7 = 7$ · $88 \div 8 = 11$ · $63 \div 7 = 9$