The Case of the Missing Diamond Pickaxe

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

Detective: _____ **Date:** _____

Someone snuck into the craft hall and stole the Grand Builder's glowing pickaxe! Solve the math clues to find the thief.

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 Block Thief is _____

Possible suspects

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

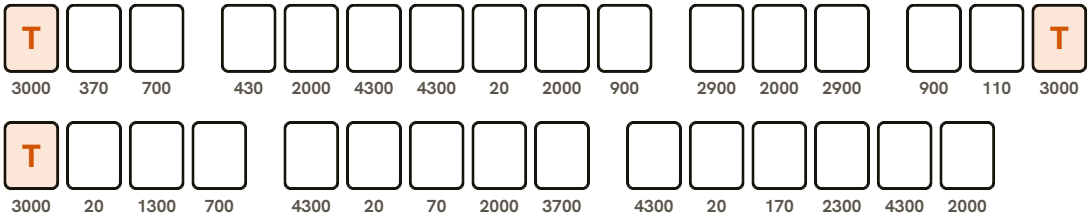
NAME	MAIN TOOL	STOLEN ITEM	DOMINANT HAND	HEADGEAR	WEAKNESS
Steve Miner	Netherite Hoe	Redstone Dust	Right Handed	Iron Helm	Water Bucket
Creeper Carl	Netherite Hoe	Glowstone Block	Left Handed	Green Cap	Water Bucket
Blocky Bob	Golden Shovel	Obsidian Block	Right Handed	Green Cap	Splash Potion
Mining Meg	Bow And Arrow	Obsidian Block	Left Handed	Leather Hood	Water Bucket
Squeaks Sam	Bow And Arrow	Glowstone Block	Right Handed	Green Cap	Lava Bucket
Dan TDM	Golden Shovel	Emerald Ore	Right Handed	Green Cap	Lava Bucket
Digging Dan	Bow And Arrow	Emerald Ore	Right Handed	Green Cap	Lava Bucket
Sammy Stone	Golden Shovel	Lapis Lazuli	Right Handed	Green Cap	Lava Bucket
Fiona Fox	Golden Shovel	Glowstone Block	Right Handed	Iron Helm	Splash Potion
Captain Spark	Golden Shovel	Redstone Dust	Right Handed	Iron Helm	Water Bucket
Pixel Pete	Golden Shovel	Obsidian Block	Right Handed	Leather Hood	Water Bucket
Aphmau Star	Bow And Arrow	Emerald Ore	Right Handed	Leather Hood	Lava Bucket
Crafty Chloe	Netherite Hoe	Emerald Ore	Left Handed	Green Cap	Lava Bucket
Squeezie Boy	Bow And Arrow	Redstone Dust	Left Handed	Green Cap	Splash Potion
Ballistic Bob	Netherite Hoe	Glowstone Block	Left Handed	Green Cap	Lava Bucket
Skitscat	Iron Axe	Lapis Lazuli	Right Handed	Green Cap	Lava Bucket
Alex Crafter	Netherite Hoe	Obsidian Block	Right Handed	Iron Helm	Lava Bucket
Techno Kid	Iron Axe	Emerald Ore	Right Handed	Leather Hood	Splash Potion
Builder Ben	Golden Shovel	Obsidian Block	Right Handed	Green Cap	Lava Bucket
Stampy Cat	Diamond Sword	Redstone Dust	Left Handed	Leather Hood	Water Bucket
Mumbo Jumbo	Iron Axe	Obsidian Block	Left Handed	Green Cap	Splash Potion

make your own at mathcrackers.com

CLUE 1 Rounding

> The village scanner gives a rounded count of blocks nearby.

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



Round 2,938 to the nearest thousand ☐ → **T**

Round 901 to the nearest hundred ☐ → **N**

Round 2,939 to the nearest hundred ☐ → **D**

Round 426 to the nearest ten ☐ → **V**

Round 1,265 to the nearest hundred ☐ → **K**

Round 373 to the nearest ten ☐ → **H**

Round 2,326 to the nearest hundred ☐ → **U**

Round 173 to the nearest ten ☐ → **Z**

Round 737 to the nearest hundred ☐ → **E**

Round 2,496 to the nearest thousand ☐ → **I**

Round 74 to the nearest ten ☐ → **P**

Round 4,315 to the nearest hundred ☐ → **L**

Round 3,746 to the nearest hundred ☐ → **S**

Round 111 to the nearest ten ☐ → **O**

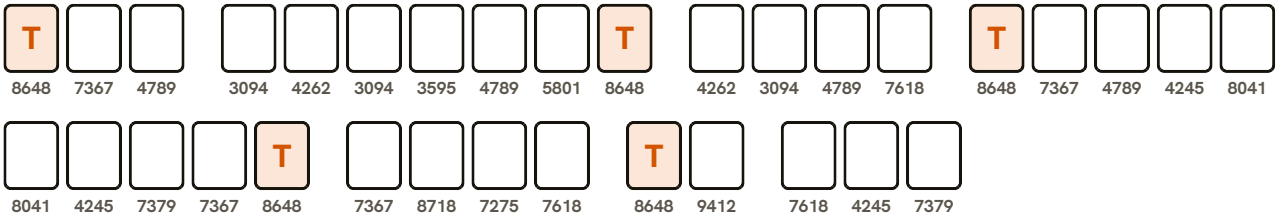
Round 18 to the nearest ten ☐ → **A**

Scratch space:

CLUE 2 Addition

We add up all the iron bars found in the chests.

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



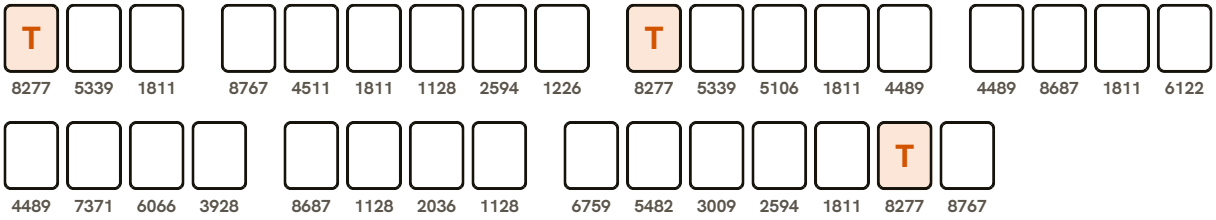
2797 + 5851 = ☐ → T	1441 + 2154 = ☐ → P	1786 + 1308 = ☐ → S
2008 + 2781 = ☐ → E	3652 + 3966 = ☐ → D	3780 + 3587 = ☐ → H
2571 + 1691 = ☐ → U	4179 + 4539 = ☐ → A	4712 + 4700 = ☐ → O
3605 + 3774 = ☐ → G	3741 + 3534 = ☐ → N	5543 + 2498 = ☐ → R
2651 + 3150 = ☐ → C	2765 + 1480 = ☐ → I	

Scratch space:

CLUE 3 Subtraction

We count how many torches are left after the storm.

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



11073 - 2796 = ☐ → T

7913 - 2431 = ☐ → U

4909 - 3098 = ☐ → E

5400 - 2806 = ☐ → K

6280 - 1791 = ☐ → F

3304 - 295 = ☐ → C

10808 - 4049 = ☐ → B

7119 - 1780 = ☐ → H

9634 - 867 = ☐ → S

5171 - 65 = ☐ → I

3971 - 1935 = ☐ → V

7208 - 1142 = ☐ → O

1699 - 571 = ☐ → A

7177 - 2666 = ☐ → N

12036 - 3349 = ☐ → L

4074 - 2848 = ☐ → Y

6753 - 2825 = ☐ → M

7208 - 1086 = ☐ → D

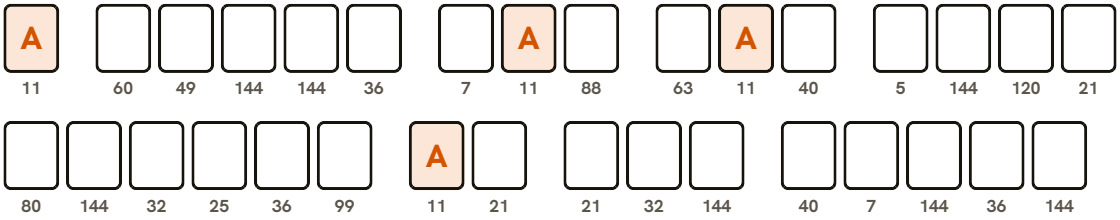
10387 - 3016 = ☐ → R

Scratch space:

CLUE 4 Multiplication facts (1-12)

We look at equal rows of wheat in the farm.

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



1 × 11 = ☐ → A	12 × 12 = ☐ → E	7 × 9 = ☐ → W
8 × 10 = ☐ → B	11 × 8 = ☐ → P	7 × 7 = ☐ → R
6 × 10 = ☐ → G	4 × 8 = ☐ → H	7 × 1 = ☐ → C	5 × 5 = ☐ → I
9 × 11 = ☐ → D	12 × 10 = ☐ → F	4 × 9 = ☐ → N
5 × 8 = ☐ → S	5 × 1 = ☐ → L	3 × 7 = ☐ → T

Scratch space:

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

> We split the gold nuggets equally among the guard team.

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:

33 ÷ 3 = ☐ | 9 ÷ 1 = ☐ | 80 ÷ 10 = ☐ | 10 ÷ 1 = ☐ | 24 ÷ 2 = ☐

4 ÷ 2 = ☐ | 7 ÷ 7 = ☐ | 3 ÷ 1 = ☐ | 30 ÷ 5 = ☐ | 12 ÷ 3 = ☐

14 ÷ 2 = ☐

Step 2 - cross out the sentence with each answer:

1. The villain dug with a golden shovel, then grabbed redstone dust.
2. The villain chopped with an iron axe, then swiped an obsidian block.
3. The villain chopped with an iron axe, then stole lapis lazuli.
4. The villain swung a diamond sword, then grabbed redstone dust.
5. The villain shot a bow and arrow, then took a glowstone block.
6. The villain swung a diamond sword, then swiped an obsidian block.
7. The villain scraped with a netherite hoe, then grabbed redstone dust.
8. The villain shot a bow and arrow, then pocketed emerald ore.
9. The villain dug with a golden shovel, then pocketed emerald ore.
10. The villain swung a diamond sword, then took a glowstone block.
11. The villain dug with a golden shovel, then swiped an obsidian block.
12. The villain swung a diamond sword, then pocketed emerald ore.

TEACHER / PARENT

Answer Key

The Case of the Missing Diamond Pickaxe

Culprit: Squeaks Sam

Bow And Arrow · Glowstone Block · Right Handed · Green Cap · Lava Bucket

Trail: Start 21 → Clue 1 19 → Clue 2 12 → Clue 3 6 → Clue 4 4 → Clue 5 1

Clue 1 (Rounding): "THE VILLAIN DID NOT TAKE LAPIS LAZULI"

Round 2,938 to the nearest thousand = 3000 (T) · Round 901 to the nearest hundred = 900 (N) · Round 2,939 to the nearest hundred = 2900 (D) · Round 426 to the nearest ten = 430 (V) · Round 1,265 to the nearest hundred = 1300 (K) · Round 373 to the nearest ten = 370 (H) · Round 2,326 to the nearest hundred = 2300 (U) · Round 173 to the nearest ten = 170 (Z) · Round 737 to the nearest hundred = 700 (E) · Round 2,496 to the nearest thousand = 2000 (I) · Round 74 to the nearest ten = 70 (P) · Round 4,315 to the nearest hundred = 4300 (L) · Round 3,746 to the nearest hundred = 3700 (S) · Round 111 to the nearest ten = 110 (O) · Round 18 to the nearest ten = 20 (A)

Clue 2 (Addition): "THE SUSPECT USED THEIR RIGHT HAND TO DIG"

2797 + 5851 = 8648 (T) · 1441 + 2154 = 3595 (P) · 1786 + 1308 = 3094 (S) · 2008 + 2781 = 4789 (E) · 3652 + 3966 = 7618 (D) · 3780 + 3587 = 7367 (H) · 2571 + 1691 = 4262 (U) · 4179 + 4539 = 8718 (A) · 4712 + 4700 = 9412 (O) · 3605 + 3774 = 7379 (G) · 3741 + 3534 = 7275 (N) · 5543 + 2498 = 8041 (R) · 2651 + 3150 = 5801 (C) · 2765 + 1480 = 4245 (I)

Clue 3 (Subtraction): "THE SNEAKY THIEF FLED FROM LAVA BUCKETS"

11073 - 2796 = 8277 (T) · 7913 - 2431 = 5482 (U) · 4909 - 3098 = 1811 (E) · 5400 - 2806 = 2594 (K) · 6280 - 1791 = 4489 (F) · 3304 - 295 = 3009 (C) · 10808 - 4049 = 6759 (B) · 7119 - 1780 = 5339 (H) · 9634 - 867 = 8767 (S) · 5171 - 65 = 5106 (I) · 3971 - 1935 = 2036 (V) · 7208 - 1142 = 6066 (O) · 1699 - 571 = 1128 (A) · 7177 - 2666 = 4511 (N) · 12036 - 3349 = 8687 (L) · 4074 - 2848 = 1226 (Y) · 6753 - 2825 = 3928 (M) · 7208 - 1086 = 6122 (D) · 10387 - 3016 = 7371 (R)

Clue 4 (Multiplication facts (1-12)): "A GREEN CAP WAS LEFT BEHIND AT THE SCENE"

1 × 11 = 11 (A) · 12 × 12 = 144 (E) · 7 × 9 = 63 (W) · 8 × 10 = 80 (B) · 11 × 8 = 88 (P) · 7 × 7 = 49 (R) · 6 × 10 = 60 (G) · 4 × 8 = 32 (H) · 7 × 1 = 7 (C) · 5 × 5 = 25 (I) · 9 × 11 = 99 (D) · 12 × 10 = 120 (F) · 4 × 9 = 36 (N) · 5 × 8 = 40 (S) · 5 × 1 = 5 (L) · 3 × 7 = 21 (T)

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

33 ÷ 3 = 11 · 9 ÷ 1 = 9 · 80 ÷ 10 = 8 · 10 ÷ 1 = 10 · 24 ÷ 2 = 12 · 4 ÷ 2 = 2 · 7 ÷ 7 = 1 · 3 ÷ 1 = 3 · 30 ÷ 5 = 6 · 12 ÷ 3 = 4 · 14 ÷ 2 = 7