The Blocky Vault Mystery

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

Detective: _____ **Date:** _____

Someone broke into the royal vault and swapped the golden apple with a yellow wool block! Detective, check the clues left behind in the pixels.

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 sneaky builder is _____

Possible suspects

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

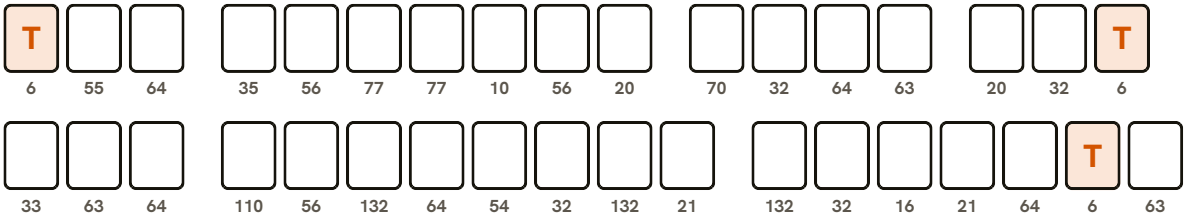
NAME	PRIMARY TOOL	SECONDARY GEAR	HOLDING HAND	HELMET COLOR	BLOCK TRAP
Ivy	Iron Axe	Obsidian Shield	Left Handed	Blue Helmet	Sticky Piston
Steve	Iron Axe	Redstone Dust	Right Handed	Purple Helmet	Water Bucket
Elena	Iron Axe	Firework Rockets	Right Handed	Blue Helmet	Anvil Drop
Kai	Enchanted Hoe	Redstone Dust	Left Handed	Blue Helmet	Sticky Piston
Max	Netherite Sword	Firework Rockets	Right Handed	Blue Helmet	Sticky Piston
Luke	Diamond Pickaxe	Firework Rockets	Right Handed	Green Helmet	Water Bucket
Ruby	Netherite Sword	Ender Pearls	Right Handed	Blue Helmet	Water Bucket
Cole	Golden Shovel	Ender Pearls	Left Handed	Blue Helmet	Water Bucket
Jax	Iron Axe	Firework Rockets	Right Handed	Green Helmet	Sticky Piston
Jade	Golden Shovel	Redstone Dust	Left Handed	Green Helmet	Water Bucket
Alex	Diamond Pickaxe	Redstone Dust	Left Handed	Blue Helmet	Water Bucket
Cora	Diamond Pickaxe	Ender Pearls	Left Handed	Blue Helmet	Water Bucket
Jay	Iron Axe	Redstone Dust	Left Handed	Green Helmet	Anvil Drop
Owen	Diamond Pickaxe	Redstone Dust	Left Handed	Green Helmet	Anvil Drop
Leo	Enchanted Hoe	Firework Rockets	Left Handed	Green Helmet	Sticky Piston
Maya	Iron Axe	Firework Rockets	Left Handed	Green Helmet	Water Bucket
Eli	Enchanted Hoe	Redstone Dust	Left Handed	Blue Helmet	Anvil Drop
Zane	Netherite Sword	Obsidian Shield	Left Handed	Blue Helmet	Anvil Drop
Mia	Enchanted Hoe	Firework Rockets	Left Handed	Blue Helmet	Water Bucket
Finn	Golden Shovel	Redstone Dust	Left Handed	Blue Helmet	Water Bucket
Sam	Iron Axe	Golden Carrot	Right Handed	Green Helmet	Water Bucket

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CLUE 1 Multiplication facts (1-12)

> The builder organized stacks of blocks into equal rows to count the total inventory.

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



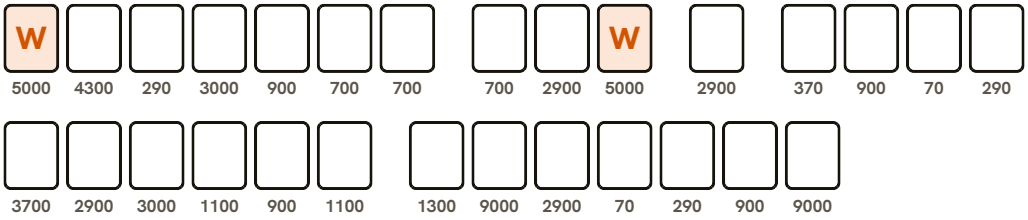
2 × 3 = ☐ → T	10 × 7 = ☐ → D	8 × 2 = ☐ → C	8 × 8 = ☐ → E
11 × 7 = ☐ → L	7 × 3 = ☐ → K	2 × 5 = ☐ → A	
11 × 3 = ☐ → U	5 × 7 = ☐ → V	10 × 11 = ☐ → F	
7 × 9 = ☐ → S	4 × 8 = ☐ → O	9 × 6 = ☐ → W	2 × 10 = ☐ → N
12 × 11 = ☐ → R	8 × 7 = ☐ → I	11 × 5 = ☐ → H	

Scratch space:

CLUE 2 Rounding

The radar screen showed an estimated count of creepers rounded to the nearest ten.

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



Round 5,021 to the nearest thousand ☐ → W

Round 1,310 to the nearest hundred ☐ → C

Round 707 to the nearest hundred ☐ → S

Round 370 to the nearest ten ☐ → L

Round 2,695 to the nearest thousand ☐ → N

Round 66 to the nearest ten ☐ → F

Round 3,730 to the nearest hundred ☐ → H

Round 884 to the nearest hundred ☐ → E

Round 1,108 to the nearest hundred ☐ → D

Round 294 to the nearest ten ☐ → T

Round 4,346 to the nearest hundred ☐ → I

Round 2,931 to the nearest hundred ☐ → A

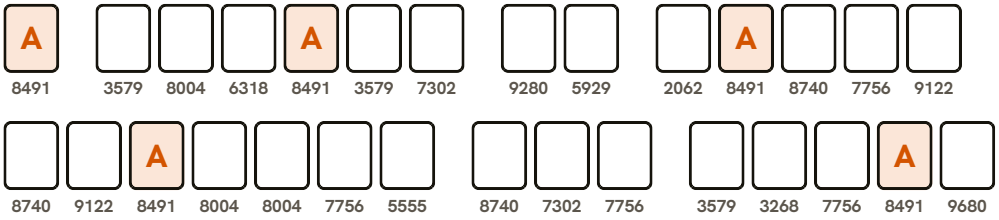
Round 8,614 to the nearest thousand ☐ → R

Scratch space:

CLUE 3 Addition

> The guild added up all the harvested items collected across three chests.

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



5856 + 2635 = ☐ → A	2967 + 5773 = ☐ → T	5005 + 2751 = ☐ → E
4048 + 1881 = ☐ → F	3823 + 1732 = ☐ → D	1122 + 2457 = ☐ → S
5067 + 2937 = ☐ → P	4631 + 5049 = ☐ → K	1137 + 2131 = ☐ → N
3386 + 3916 = ☐ → H	4648 + 4632 = ☐ → O	1383 + 679 = ☐ → W
3930 + 5192 = ☐ → R	3649 + 2669 = ☐ → L	

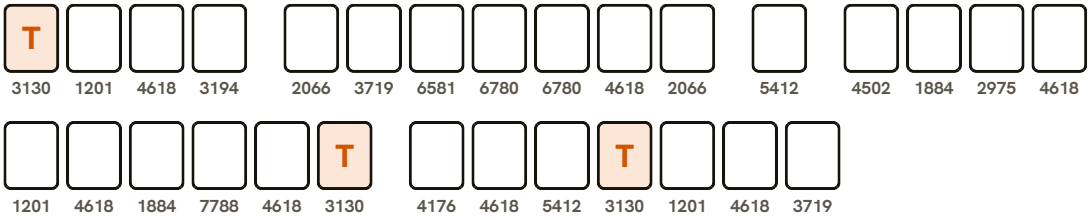
Scratch space:

CLUE 4

Subtraction

The guard calculated how many iron bars were missing from the gate.

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



6810 - 3680 = ☐ → T

6869 - 3675 = ☐ → Y

11648 - 4868 = ☐ → P

9063 - 1275 = ☐ → M

4959 - 3075 = ☐ → L

7389 - 4414 = ☐ → U

7706 - 3987 = ☐ → R

5111 - 3045 = ☐ → D

4838 - 220 = ☐ → E

10281 - 4869 = ☐ → A

4650 - 3449 = ☐ → H

8546 - 4370 = ☐ → F

8340 - 1759 = ☐ → O

5019 - 517 = ☐ → B

Scratch space:

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

> The builder split the shiny lapis blocks equally among the craft benches.

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:

36 ÷ 4 = ☐	12 ÷ 6 = ☐	36 ÷ 12 = ☐	36 ÷ 9 = ☐	1 ÷ 1 = ☐
63 ÷ 9 = ☐	30 ÷ 3 = ☐	120 ÷ 10 = ☐	20 ÷ 4 = ☐	22 ÷ 2 = ☐
16 ÷ 2 = ☐				

Step 2 - cross out the sentence with each answer:

1. The villain chopped down the oak door, then zoomed off using Firework Rockets.
2. The villain dug under the floorboards, then laid a trail of Redstone Dust.
3. The villain mined through the stone wall, then teleported away with Ender Pearls.
4. The villain mined through the stone wall, then blocked arrows with an Obsidian Shield.
5. The villain slashed open the chest, then munched on a Golden Carrot for speed.
6. The villain mined through the stone wall, then laid a trail of Redstone Dust.
7. The villain tilled the soil near the escape hatch, then teleported away with Ender Pearls.
8. The villain chopped down the oak door, then teleported away with Ender Pearls.
9. The villain dug under the floorboards, then teleported away with Ender Pearls.
10. The villain tilled the soil near the escape hatch, then laid a trail of Redstone Dust.
11. The villain slashed open the chest, then zoomed off using Firework Rockets.
12. The villain chopped down the oak door, then munched on a Golden Carrot for speed.

TEACHER / PARENT

Answer Key

The Blocky Vault Mystery

Culprit: Alex

Diamond Pickaxe · Redstone Dust · Left Handed · Blue Helmet · Water Bucket

Trail: Start 21 → Clue 1 14 → Clue 2 11 → Clue 3 5 → Clue 4 4 → Clue 5 1

Clue 1 (Multiplication facts (1-12)): "THE VILLAIN DOES NOT USE FIREWORK ROCKETS"

2 × 3 = 6 (T) · 10 × 7 = 70 (D) · 8 × 2 = 16 (C) · 8 × 8 = 64 (E) · 11 × 7 = 77 (L) · 7 × 3 = 21 (K) · 2 × 5 = 10 (A) · 11 × 3 = 33 (U) · 5 × 7 = 35 (V) · 10 × 11 = 110 (F) · 7 × 9 = 63 (S) · 4 × 8 = 32 (O) · 9 × 6 = 54 (W) · 2 × 10 = 20 (N) · 12 × 11 = 132 (R) · 8 × 7 = 56 (I) · 11 × 5 = 55 (H)

Clue 2 (Rounding): "WITNESS SAW A LEFT HANDED CRAFTER"

Round 5,021 to the nearest thousand = 5000 (W) · Round 1,310 to the nearest hundred = 1300 (C) · Round 707 to the nearest hundred = 700 (S) · Round 370 to the nearest ten = 370 (L) · Round 2,695 to the nearest thousand = 3000 (N) · Round 66 to the nearest ten = 70 (F) · Round 3,730 to the nearest hundred = 3700 (H) · Round 884 to the nearest hundred = 900 (E) · Round 1,108 to the nearest hundred = 1100 (D) · Round 294 to the nearest ten = 290 (T) · Round 4,346 to the nearest hundred = 4300 (I) · Round 2,931 to the nearest hundred = 2900 (A) · Round 8,614 to the nearest thousand = 9000 (R)

Clue 3 (Addition): "A SPLASH OF WATER TRAPPED THE SNEAK"

5856 + 2635 = 8491 (A) · 2967 + 5773 = 8740 (T) · 5005 + 2751 = 7756 (E) · 4048 + 1881 = 5929 (F) · 3823 + 1732 = 5555 (D) · 1122 + 2457 = 3579 (S) · 5067 + 2937 = 8004 (P) · 4631 + 5049 = 9680 (K) · 1137 + 2131 = 3268 (N) · 3386 + 3916 = 7302 (H) · 4648 + 4632 = 9280 (O) · 1383 + 679 = 2062 (W) · 3930 + 5192 = 9122 (R) · 3649 + 2669 = 6318 (L)

Clue 4 (Subtraction): "THEY DROPPED A BLUE HELMET FEATHER"

6810 - 3680 = 3130 (T) · 6869 - 3675 = 3194 (Y) · 11648 - 4868 = 6780 (P) · 9063 - 1275 = 7788 (M) · 4959 - 3075 = 1884 (L) · 7389 - 4414 = 2975 (U) · 7706 - 3987 = 3719 (R) · 5111 - 3045 = 2066 (D) · 4838 - 220 = 4618 (E) · 10281 - 4869 = 5412 (A) · 4650 - 3449 = 1201 (H) · 8546 - 4370 = 4176 (F) · 8340 - 1759 = 6581 (O) · 5019 - 517 = 4502 (B)

Clue 5 (Division facts (1-12)): surviving statement is box 6 → Alex

36 ÷ 4 = 9 · 12 ÷ 6 = 2 · 36 ÷ 12 = 3 · 36 ÷ 9 = 4 · 1 ÷ 1 = 1 · 63 ÷ 9 = 7 · 30 ÷ 3 = 10 · 120 ÷ 10 = 12 · 20 ÷ 4 = 5 · 22 ÷ 2 = 11 · 16 ÷ 2 = 8