The Mystery of the Missing Diamond Block

Grade 4 math · Fractions of a number, Multiplication, Rounding, Addition · Reading level grades 3-4

Detective: _____ **Date:** _____

Someone snuck into the Craft Hall and snatched the giant Diamond Block! Master Builder Steve needs your help decoding clues to catch 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.

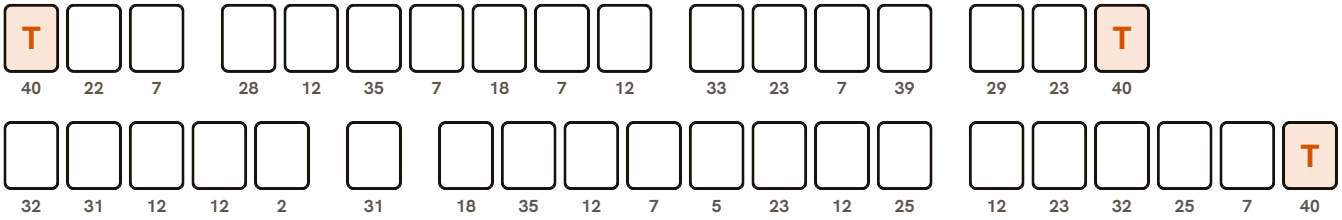
NAME	MAIN TOOL	OFFHAND ITEM	DOMINANT HAND	HEADGEAR	TRAP MATERIAL
Tango Tek	Golden Shovel	Ender Pearl	Right Handed	Golden Mining Cap	Honey Block
Pixel Pete	Netherite Sword	Golden Apple	Left Handed	Emerald Helmet	Honey Block
LDShadowLady	Netherite Sword	Ender Pearl	Left Handed	Emerald Helmet	Water Potion
GoodTimesWithScar	Enchanted Bow	Golden Apple	Right Handed	Emerald Helmet	Honey Block
Aphmau Star	Redstone Repeater	Golden Apple	Left Handed	Golden Mining Cap	Milk Bucket
Captain Sparklez	Netherite Sword	Ender Pearl	Left Handed	Golden Mining Cap	Milk Bucket
Gemini Tay	Redstone Repeater	Totem of Undying	Left Handed	Obsidian Mask	Honey Block
BdoubleO OneHundred	Redstone Repeater	Elytra Wings	Right Handed	Obsidian Mask	Water Potion
DanTDM	Redstone Repeater	Firework Rocket	Left Handed	Emerald Helmet	Honey Block
SmallishBeans	Golden Shovel	Firework Rocket	Right Handed	Golden Mining Cap	Honey Block
Rendog	Netherite Sword	Ender Pearl	Right Handed	Golden Mining Cap	Water Potion
Alex Crafter	Golden Shovel	Ender Pearl	Right Handed	Obsidian Mask	Milk Bucket
Crafty Miner	Enchanted Bow	Totem of Undying	Left Handed	Obsidian Mask	Water Potion
Etho Slab	Redstone Repeater	Firework Rocket	Left Handed	Obsidian Mask	Honey Block
Grian Builder	Golden Shovel	Totem of Undying	Right Handed	Golden Mining Cap	Honey Block
Docm SeventySeven	Enchanted Bow	Totem of Undying	Left Handed	Emerald Helmet	Honey Block
Pearl Moon	Redstone Repeater	Golden Apple	Left Handed	Emerald Helmet	Honey Block
Sizzling Creeper	Diamond Pickaxe	Firework Rocket	Right Handed	Emerald Helmet	Water Potion
Mumbo Jumbo	Netherite Sword	Elytra Wings	Left Handed	Emerald Helmet	Honey Block
Stampy Cat	Netherite Sword	Elytra Wings	Left Handed	Emerald Helmet	Milk Bucket
Steve Block	Enchanted Bow	Elytra Wings	Right Handed	Obsidian Mask	Water Potion

make your own at mathcrackers.com

CLUE 1 Fractions of a number

A fraction of the chest logs were searched to reveal a clue.

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



2/10 of 200 = ☐ → T

3/10 of 130 = ☐ → S

6/10 of 30 = ☐ → F

2/10 of 175 = ☐ → I

3/6 of 14 = ☐ → E

8/10 of 15 = ☐ → R

1/6 of 150 = ☐ → K

1/2 of 56 = ☐ → G

3/6 of 58 = ☐ → N

1/4 of 8 = ☐ → Y

3/5 of 55 = ☐ → D

1/8 of 184 = ☐ → O

1/3 of 93 = ☐ → A

1/3 of 96 = ☐ → C

1/8 of 176 = ☐ → H

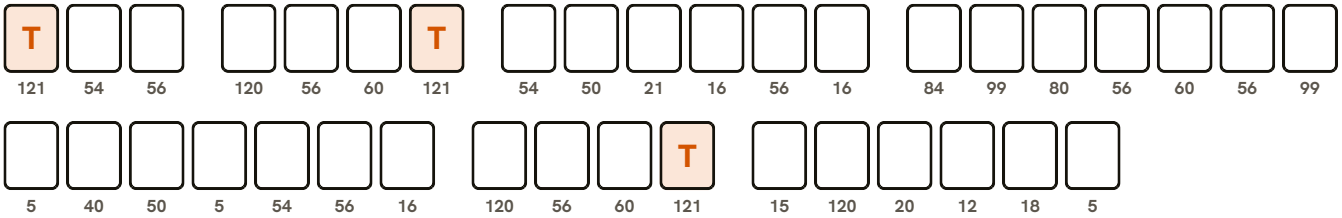
4/8 of 10 = ☐ → W

Scratch space:

CLUE 2 Multiplication facts (1-12)

> We counted block stacks in equal rows to uncover evidence.

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



11 × 11 = ☐ → T

2 × 8 = ☐ → D

10 × 5 = ☐ → A

8 × 7 = ☐ → E

11 × 9 = ☐ → R

10 × 2 = ☐ → O

3 × 5 = ☐ → B

2 × 6 = ☐ → C

6 × 9 = ☐ → H

10 × 12 = ☐ → L

6 × 3 = ☐ → K

12 × 5 = ☐ → F

8 × 5 = ☐ → M

12 × 7 = ☐ → G

5 × 1 = ☐ → S

3 × 7 = ☐ → N

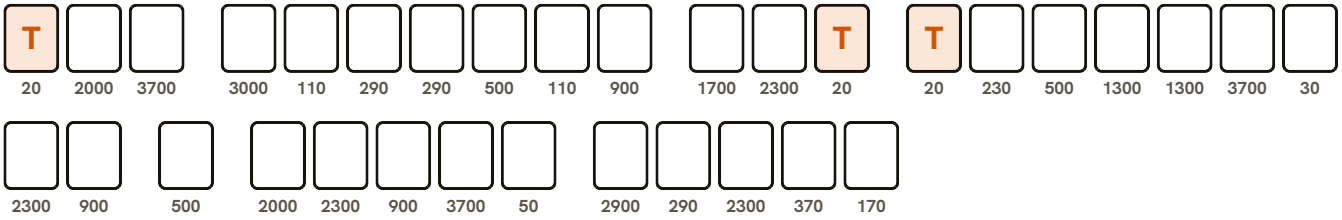
8 × 10 = ☐ → I

Scratch space:

CLUE 3 Rounding

> The redstone counter rounded the nearby total to spot a lead.

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



Round 17 to the nearest ten ☐ → **T**

Round 30 to the nearest ten ☐ → **D**

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

Round 170 to the nearest ten ☐ → **K**

Round 2,925 to the nearest hundred ☐ → **B**

Round 2,440 to the nearest thousand ☐ → **H**

Round 909 to the nearest hundred ☐ → **N**

Round 3,424 to the nearest thousand ☐ → **V**

Round 542 to the nearest hundred ☐ → **A**

Round 294 to the nearest ten ☐ → **L**

Round 231 to the nearest ten ☐ → **R**

Round 371 to the nearest ten ☐ → **C**

Round 3,744 to the nearest hundred ☐ → **E**

Round 114 to the nearest ten ☐ → **I**

Round 2,270 to the nearest hundred ☐ → **O**

Round 1,721 to the nearest hundred ☐ → **G**

Round 51 to the nearest ten ☐ → **Y**

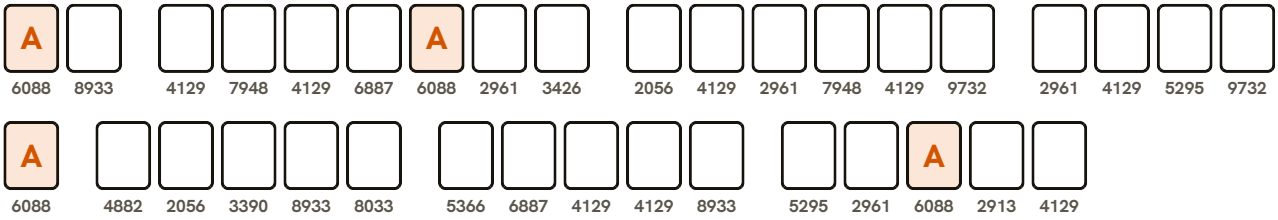
Scratch space:

CLUE 4

Addition

Adding up all gathered emeralds unlocked the next clue.

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



2934 + 3154 = ☐ → A

4638 + 5094 = ☐ → T

1794 + 1119 = ☐ → K

1574 + 1816 = ☐ → I

3393 + 3494 = ☐ → R

1548 + 3334 = ☐ → S

3532 + 1763 = ☐ → F

1658 + 1768 = ☐ → D

2566 + 2800 = ☐ → G

1188 + 1773 = ☐ → L

3637 + 4311 = ☐ → M

4898 + 3135 = ☐ → Y

4553 + 4380 = ☐ → N

1286 + 770 = ☐ → H

2024 + 2105 = ☐ → E

Scratch space:

CLUE 5

Fractions of a number - the last clue

> Finding a fraction of hidden ores gave us the final hint.

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:

1/6 of 48 = ☐	1/2 of 18 = ☐	1/3 of 33 = ☐	5/8 of 8 = ☐
1/6 of 42 = ☐	2/3 of 3 = ☐	2/10 of 20 = ☐	1/2 of 12 = ☐
1/4 of 4 = ☐	1/4 of 48 = ☐	5/8 of 16 = ☐	

Step 2 - cross out the sentence with each answer:

1. The villain dug with a golden shovel, then soared on elytra wings.
2. The villain brandished a netherite sword, then clutched a totem of undying.
3. The villain brandished a netherite sword, then ate a golden apple.
4. The villain swung a diamond pickaxe, then ate a golden apple.
5. The villain dug with a golden shovel, then ignited a firework rocket.
6. The villain aimed an enchanted bow, then ate a golden apple.
7. The villain swung a diamond pickaxe, then clutched a totem of undying.
8. The villain wired a redstone repeater, then ate a golden apple.
9. The villain brandished a netherite sword, then soared on elytra wings.
10. The villain wired a redstone repeater, then clutched a totem of undying.
11. The villain aimed an enchanted bow, then clutched a totem of undying.
12. The villain brandished a netherite sword, then tossed an ender pearl.

TEACHER / PARENT

Answer Key

The Mystery of the Missing Diamond Block

Culprit: Pixel Pete

Netherite Sword · Golden Apple · Left Handed · Emerald Helmet · Honey Block

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

Clue 1 (Fractions of a number): "THE GRIEFER DOES NOT CARRY A FIREWORK ROCKET"

2/10 of 200 = 40 (T) · 3/10 of 130 = 39 (S) · 6/10 of 30 = 18 (F) · 2/10 of 175 = 35 (I) · 3/6 of 14 = 7 (E) · 8/10 of 15 = 12 (R) · 1/6 of 150 = 25 (K) · 1/2 of 56 = 28 (G) · 3/6 of 58 = 29 (N) · 1/4 of 8 = 2 (Y) · 3/5 of 55 = 33 (D) · 1/8 of 184 = 23 (O) · 1/3 of 93 = 31 (A) · 1/3 of 96 = 32 (C) · 1/8 of 176 = 22 (H) · 4/8 of 10 = 5 (W)

Clue 2 (Multiplication facts (1-12)): "THE LEFT HANDED GRIEFER SMASHED LEFT BLOCKS"

11 × 11 = 121 (T) · 2 × 8 = 16 (D) · 10 × 5 = 50 (A) · 8 × 7 = 56 (E) · 11 × 9 = 99 (R) · 10 × 2 = 20 (O) · 3 × 5 = 15 (B) · 2 × 6 = 12 (C) · 6 × 9 = 54 (H) · 10 × 12 = 120 (L) · 6 × 3 = 18 (K) · 12 × 5 = 60 (F) · 8 × 5 = 40 (M) · 12 × 7 = 84 (G) · 5 × 1 = 5 (S) · 3 × 7 = 21 (N) · 8 × 10 = 80 (I)

Clue 3 (Rounding): "THE VILLAIN GOT TRAPPED ON A HONEY BLOCK"

Round 17 to the nearest ten = 20 (T) · Round 30 to the nearest ten = 30 (D) · Round 1,265 to the nearest hundred = 1300 (P) · Round 170 to the nearest ten = 170 (K) · Round 2,925 to the nearest hundred = 2900 (B) · Round 2,440 to the nearest thousand = 2000 (H) · Round 909 to the nearest hundred = 900 (N) · Round 3,424 to the nearest thousand = 3000 (V) · Round 542 to the nearest hundred = 500 (A) · Round 294 to the nearest ten = 290 (L) · Round 231 to the nearest ten = 230 (R) · Round 371 to the nearest ten = 370 (C) · Round 3,744 to the nearest hundred = 3700 (E) · Round 114 to the nearest ten = 110 (I) · Round 2,270 to the nearest hundred = 2300 (O) · Round 1,721 to the nearest hundred = 1700 (G) · Round 51 to the nearest ten = 50 (Y)

Clue 4 (Addition): "AN EMERALD HELMET LEFT A SHINY GREEN FLAKE"

2934 + 3154 = 6088 (A) · 4638 + 5094 = 9732 (T) · 1794 + 1119 = 2913 (K) · 1574 + 1816 = 3390 (I) · 3393 + 3494 = 6887 (R) · 1548 + 3334 = 4882 (S) · 3532 + 1763 = 5295 (F) · 1658 + 1768 = 3426 (D) · 2566 + 2800 = 5366 (G) · 1188 + 1773 = 2961 (L) · 3637 + 4311 = 7948 (M) · 4898 + 3135 = 8033 (Y) · 4553 + 4380 = 8933 (N) · 1286 + 770 = 2056 (H) · 2024 + 2105 = 4129 (E)

Clue 5 (Fractions of a number): surviving statement is box 3 → Pixel Pete

1/6 of 48 = 8 · 1/2 of 18 = 9 · 1/3 of 33 = 11 · 5/8 of 8 = 5 · 1/6 of 42 = 7 · 2/3 of 3 = 2 · 2/10 of 20 = 4 · 1/2 of 12 = 6 · 1/4 of 4 = 1 · 1/4 of 48 = 12 · 5/8 of 16 = 10