



The Cloud Museum Caper

Grade 5 math · Place value, Fractions of a number, Order of operations, Multiplication, Division · Reading level grades 5-6

Detective: _____ **Date:** _____

The Golden Solar Compass has been snatched from the floating Cloud Museum! A sneaky Sky Bandit slipped past the spinning propeller traps and zoomed off into the clouds. Detective, we must find which explorer did it before they vanish forever.

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 Sky Bandit is _____

Possible suspects

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

NAME	PRIMARY GEAR	BACKUP TOOL	DOMINANT HAND	HAIR STYLE	SILLY WEAKNESS
Indiana Isaac	Grappling Hook	Net Launcher	Left-handed	Braided Gold	Shiny Coins
Professor Albert	Grappling Hook	Bungee Rope	Right-handed	Braided Gold	Tickle Feathers
Rusty Rotor	Smoke Bombs	Bungee Rope	Right-handed	Curly Brown	Maple Syrup
Doc Dynamo	Glider Pack	Flash Powder	Left-handed	Braided Gold	Shiny Coins
Quincy Quick	Smoke Bombs	Net Launcher	Right-handed	Spiky Red	Maple Syrup
Explorer Edward	Smoke Bombs	Laser Cutter	Right-handed	Spiky Red	Maple Syrup
Gus Goggles	Glider Pack	Laser Cutter	Left-handed	Braided Gold	Maple Syrup
Jasper Jet	Magnetic Boots	Bungee Rope	Right-handed	Curly Brown	Maple Syrup
Penny Propeller	Spyglass Lens	Flash Powder	Left-handed	Curly Brown	Shiny Coins
Oscar Otto	Magnetic Boots	Flash Powder	Left-handed	Braided Gold	Tickle Feathers
Sally Solar	Grappling Hook	Net Launcher	Right-handed	Curly Brown	Shiny Coins
Barnaby Beard	Magnetic Boots	Laser Cutter	Left-handed	Braided Gold	Shiny Coins
Nelly Nimbus	Spyglass Lens	Net Launcher	Right-handed	Curly Brown	Maple Syrup
Kat Kidwind	Magnetic Boots	Laser Cutter	Right-handed	Curly Brown	Maple Syrup
Clara Cloud	Grappling Hook	Net Launcher	Left-handed	Curly Brown	Maple Syrup
Victor Vapor	Smoke Bombs	Laser Cutter	Right-handed	Braided Gold	Tickle Feathers
Baron Von Bolt	Spyglass Lens	Net Launcher	Right-handed	Spiky Red	Tickle Feathers
Captain Amelia	Glider Pack	Laser Cutter	Left-handed	Braided Gold	Shiny Coins
Hazel Hover	Magnetic Boots	Bungee Rope	Right-handed	Curly Brown	Shiny Coins
Toby Turbine	Glider Pack	Net Launcher	Right-handed	Braided Gold	Maple Syrup
Wendy Wing	Magnetic Boots	Sonic Whistle	Right-handed	Curly Brown	Maple Syrup

CLUE 1

To decode the first security log, you must examine the values of the digits on the control screen. Solve this place value puzzle to unlock the security vault and reveal the first clue.

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

What is the value of the 3 in 93,250? → **T**

What is the value of the 1 in 775,137? → **A**

What is the value of the 7 in 37,689? →

What is the value of the 6 in 26,243? → **B**

What is the value of the 1 in 969,317? →

What is the value of the 3 in 55,399? → **D**

What is the value of the 4 in 187,497? → **E**

What is the value of the 8 in 446,805? → **L**

What is the value of the 9 in 75,591? → **H**

What is the value of the 6 in 31,655? → **C**

What is the value of the 7 in 882,754? → **N**

What is the value of the 5 in 395,768? →

What is the value of the 2 in 850,928? → **S**

What is the value of the 8 in 48,919? → **R**

Scratch space:

CLUE 2

Fractions of a number

A crate of energy crystals was knocked over. Calculate what fraction of the crystals still glow so we can power up the museum's tracking system and get our next lead.

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

T																			
27	14	23	3	36	18	12	24	30	18	3	21	19	12	24	23	32	34	21	
		T							T										
30	19	27	14	18	39	19	29	14	27	14	18	36	32						

$1/5 \text{ of } 135 = \square \rightarrow \boxed{\text{T}}$

$2/5 \text{ of } 30 = \square \rightarrow \boxed{\text{C}}$

$2/4 \text{ of } 28 = \square \rightarrow \boxed{\text{H}}$

$1/2 \text{ of } 58 = \square \rightarrow \boxed{\text{G}}$

$4/10 \text{ of } 80 = \square \rightarrow \boxed{\text{D}}$

$2/10 \text{ of } 105 = \square \rightarrow \boxed{\text{P}}$

$2/6 \text{ of } 69 = \square \rightarrow \boxed{\text{E}}$

$4/5 \text{ of } 30 = \square \rightarrow \boxed{\text{K}}$

$1/5 \text{ of } 15 = \square \rightarrow \boxed{\text{S}}$

$1/5 \text{ of } 195 = \square \rightarrow \boxed{\text{R}}$

$4/6 \text{ of } 54 = \square \rightarrow \boxed{\text{N}}$

$2/6 \text{ of } 102 = \square \rightarrow \boxed{\text{U}}$

$4/10 \text{ of } 75 = \square \rightarrow \boxed{\text{W}}$

$3/10 \text{ of } 60 = \square \rightarrow \boxed{\text{A}}$

$1/3 \text{ of } 57 = \square \rightarrow \boxed{\text{I}}$

Scratch space:

Order of operations

The engine levers must be pulled in a strict order of operations. Solve the equation correctly to start the sky-ship engine and discover where the bandit fled.

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

46 74 22 36 25 31 11 32 46 42 25 47 47 46 60 10 53 32 31

65 25 56 28 22 47 45 17 60 56

$$6 \times 8 - 2 = \boxed{} \rightarrow \boxed{\text{T}}$$

$$39 + 2 \times 3 = \boxed{} \rightarrow \boxed{\text{Y}}$$

$$5 \times 11 - 8 = \boxed{} \rightarrow \boxed{\text{S}}$$

$9 \times 4 - 25 = \boxed{} \rightarrow \boxed{\mathbf{D}}$

$$38 + 3 \times 6 = \boxed{} \rightarrow \boxed{\text{P}}$$

$$6 \times 6 - 4 = \boxed{} \rightarrow \boxed{I}$$

$$6 \times 9 - 12 = \boxed{} \rightarrow \boxed{\mathbf{W}}$$

$$8 + 7 \times 4 = \boxed{} \rightarrow \boxed{\text{B}}$$

$$4 + 3 \times 2 = \boxed{} \rightarrow \boxed{\mathbf{C}}$$

$$23 + 4 \times 2 = \boxed{} \rightarrow \boxed{\mathbf{N}}$$

$$7 \times 8 - 3 = \boxed{} \rightarrow \boxed{\text{K}}$$

$$3 \times 6 - 1 = \boxed{} \rightarrow \boxed{\mathbf{R}}$$

$$7 + 7 \times 3 = \boxed{} \rightarrow \boxed{\text{L}}$$

$$10 \times 8 - 15 = \boxed{} \rightarrow \boxed{\text{M}}$$

$9 \times 5 - 23 = \boxed{} \rightarrow \boxed{\text{E}}$

$$12 \times 4 - 23 = \boxed{} \rightarrow \boxed{\mathbf{A}}$$

$$12 \times 8 - 22 = \boxed{} \rightarrow \boxed{\text{H}}$$

$$6 \times 12 - 12 = \boxed{} \rightarrow \boxed{\text{U}}$$

Scratch space:

CLUE 4
Multiplication facts (1-12)

The cargo bay has rows of toolboxes lined up. Multiply the number of boxes in each row to count the gear and find the clue left in the storage unit.

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

C																
48	80	14	63	4	49	14	24	64	54	44	18	14	90	54	12	44
64	1	14	1	63	1	60	18	49	1	121	9	54	12			

$6 \times 8 = \square \rightarrow$ C	$5 \times 12 = \square \rightarrow$ F	$1 \times 9 = \square \rightarrow$ I	$1 \times 1 = \square \rightarrow$ E
$11 \times 11 = \square \rightarrow$ H	$2 \times 2 = \square \rightarrow$ Y	$8 \times 8 = \square \rightarrow$ W	
$7 \times 7 = \square \rightarrow$ B	$8 \times 10 = \square \rightarrow$ U	$6 \times 4 = \square \rightarrow$ O	$6 \times 2 = \square \rightarrow$ D
$9 \times 10 = \square \rightarrow$ A	$6 \times 3 = \square \rightarrow$ T	$4 \times 11 = \square \rightarrow$ S	
$9 \times 7 = \square \rightarrow$ L	$9 \times 6 = \square \rightarrow$ N	$7 \times 2 = \square \rightarrow$ R	

Scratch space:

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

The local sky-scouts need to divide their map pieces equally among the team. Help them share the pieces to uncover the final clue.

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:

$30 \div 5 = \boxed{}$

$6 \div 6 = \boxed{}$

$56 \div 8 = \boxed{}$

$6 \div 3 = \boxed{}$

$80 \div 10 = \boxed{}$

$60 \div 12 = \boxed{}$

$27 \div 9 = \boxed{}$

$108 \div 9 = \boxed{}$

$28 \div 7 = \boxed{}$

$66 \div 6 = \boxed{}$

$120 \div 12 = \boxed{}$

Step 2 - cross out the sentence with each answer:

1. The villain stomped up the metal wall using magnetic boots, then bounced off the balcony on a bungee rope.
2. The villain swung away using a grappling hook, then trapped the sky patrol using a net launcher.
3. The villain vanished into a cloud of smoke bombs, then trapped the sky patrol using a net launcher.
4. The villain vanished into a cloud of smoke bombs, then distracted the guard dogs with a sonic whistle.
5. The villain scanned the horizon with a spyglass lens, then bounced off the balcony on a bungee rope.
6. The villain vanished into a cloud of smoke bombs, then bounced off the balcony on a bungee rope.
7. The villain scanned the horizon with a spyglass lens, then trapped the sky patrol using a net launcher.
8. The villain soared through the clouds on a glider pack, then sliced through the glass dome with a laser cutter.
9. The villain stomped up the metal wall using magnetic boots, then distracted the guard dogs with a sonic whistle.
10. The villain scanned the horizon with a spyglass lens, then sliced through the glass dome with a laser cutter.
11. The villain soared through the clouds on a glider pack, then distracted the guard dogs with a sonic whistle.
12. The villain vanished into a cloud of smoke bombs, then sliced through the glass dome with a laser cutter.

Answer Key

The Cloud Museum Caper

Culprit: Wendy Wing

Magnetic Boots · Sonic Whistle · Right-handed · Curly Brown · Maple Syrup

Trail: Start 21 → Clue 1 15 → Clue 2 10 → Clue 3 6 → Clue 4 4 → Clue 5 1

Clue 1 (Place value): "THE BANDIT DOES NOT USE A LASER CUTTER"

What is the value of the 3 in 93,250? = 3000 (T) · What is the value of the 1 in 775,137? = 100 (A) · What is the value of the 7 in 37,689? = 7000 (U) · What is the value of the 6 in 26,243? = 6000 (B) · What is the value of the 1 in 969,317? = 10 (O) · What is the value of the 3 in 55,399? = 300 (D) · What is the value of the 4 in 187,497? = 400 (E) · What is the value of the 8 in 446,805? = 800 (L) · What is the value of the 9 in 75,591? = 90 (H) · What is the value of the 6 in 31,655? = 600 (C) · What is the value of the 7 in 882,754? = 700 (N) · What is the value of the 5 in 395,768? = 5000 (I) · What is the value of the 2 in 850,928? = 20 (S) · What is the value of the 8 in 48,919? = 8000 (R)

Clue 2 (Fractions of a number): "THE SNACK WAS PICKED UP WITH A RIGHT HAND"

$\frac{1}{5}$ of 135 = 27 (T) · $\frac{2}{5}$ of 30 = 12 (C) · $\frac{2}{4}$ of 28 = 14 (H) · $\frac{1}{2}$ of 58 = 29 (G) · $\frac{4}{10}$ of 80 = 32 (D) · $\frac{2}{10}$ of 105 = 21 (P) · $\frac{2}{6}$ of 69 = 23 (E) · $\frac{4}{5}$ of 30 = 24 (K) · $\frac{1}{5}$ of 15 = 3 (S) · $\frac{1}{5}$ of 195 = 39 (R) · $\frac{4}{6}$ of 54 = 36 (N) · $\frac{2}{6}$ of 102 = 34 (U) · $\frac{4}{10}$ of 75 = 30 (W) · $\frac{3}{10}$ of 60 = 18 (A) · $\frac{1}{3}$ of 57 = 19 (I)

Clue 3 (Order of operations): "THE BANDIT WAS STUCK IN MAPLE SYRUP"

$6 \times 8 - 2 = 46$ (T) · $39 + 2 \times 3 = 45$ (Y) · $5 \times 11 - 8 = 47$ (S) · $9 \times 4 - 25 = 11$ (D) · $38 + 3 \times 6 = 56$ (P) · $6 \times 6 - 4 = 32$ (I) · $6 \times 9 - 12 = 42$ (W) · $8 + 7 \times 4 = 36$ (B) · $4 + 3 \times 2 = 10$ (C) · $23 + 4 \times 2 = 31$ (N) · $7 \times 8 - 3 = 53$ (K) · $3 \times 6 - 1 = 17$ (R) · $7 + 7 \times 3 = 28$ (L) · $10 \times 8 - 15 = 65$ (M) · $9 \times 5 - 23 = 22$ (E) · $12 \times 4 - 23 = 25$ (A) · $12 \times 8 - 22 = 74$ (H) · $6 \times 12 - 12 = 60$ (U)

Clue 4 (Multiplication facts (1-12)): "CURLY BROWN STRANDS WERE LEFT BEHIND"

$6 \times 8 = 48$ (C) · $5 \times 12 = 60$ (F) · $1 \times 9 = 9$ (I) · $1 \times 1 = 1$ (E) · $11 \times 11 = 121$ (H) · $2 \times 2 = 4$ (Y) · $8 \times 8 = 64$ (W) · $7 \times 7 = 49$ (B) · $8 \times 10 = 80$ (U) · $6 \times 4 = 24$ (O) · $6 \times 2 = 12$ (D) · $9 \times 10 = 90$ (A) · $6 \times 3 = 18$ (T) · $4 \times 11 = 44$ (S) · $9 \times 7 = 63$ (L) · $9 \times 6 = 54$ (N) · $7 \times 2 = 14$ (R)

Clue 5 (Division facts (1-12)): surviving statement is box 9 → Wendy Wing

$30 \div 5 = 6$ · $6 \div 6 = 1$ · $56 \div 8 = 7$ · $6 \div 3 = 2$ · $80 \div 10 = 8$ · $60 \div 12 = 5$ · $27 \div 9 = 3$ · $108 \div 9 = 12$ · $28 \div 7 = 4$ · $66 \div 6 = 11$ · $120 \div 12 = 10$