



The Great Sky-Island Heist

Grade 5 math · Addition, Subtraction, Multiplication, Multi-step word problems, Division · Reading level grades 5-6

Detective: _____ Date: _____

The legendary Star-Map has been snatched from the floating Grand Observatory! Without it, the Sky-Islands will be lost in the endless clouds forever. As the Lead Detective of the Aero-Explorer Squad, you must take to the skies, solve the clues left behind, and recover the map from the mysterious sky-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 sky-thief is _____

Possible suspects

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

NAME	AIRSHIP GEAR	PET COMPANION	OBSERVED CLUE	HAIR COLOR	SECRET OBSTACLE
Merlin	Wind Blaster	Pygmy Dragon	Right-handed glove	Braided red hair	Shiny gold coins
Jacques	Grapple Glove	Clockwork Beetle	Right-handed glove	Curly green hair	Shiny gold coins
Indiana	Cloud Cloak	Mechanical Falcon	Left-handed glove	Spiky blue hair	Sweet maple syrup
Kai	Gravity Boots	Mechanical Falcon	Right-handed glove	Braided red hair	High-pitched whistles
Lara	Storm Shield	Mechanical Falcon	Left-handed glove	Curly green hair	Shiny gold coins
Robin	Cloud Cloak	Bubble Octopus	Right-handed glove	Spiky blue hair	High-pitched whistles
Buzz	Cloud Cloak	Bubble Octopus	Right-handed glove	Curly green hair	High-pitched whistles
Cole	Storm Shield	Bubble Octopus	Right-handed glove	Braided red hair	Sweet maple syrup
Hazel	Wind Blaster	Clockwork Beetle	Left-handed glove	Spiky blue hair	Sweet maple syrup
Annabeth	Cloud Cloak	Clockwork Beetle	Right-handed glove	Curly green hair	High-pitched whistles
Lloyd	Storm Shield	Pygmy Dragon	Left-handed glove	Braided red hair	Sweet maple syrup
Diana	Gravity Boots	Mechanical Falcon	Left-handed glove	Curly green hair	High-pitched whistles
Amelia	Cloud Cloak	Cyber Squirrel	Right-handed glove	Spiky blue hair	High-pitched whistles
Nya	Gravity Boots	Pygmy Dragon	Left-handed glove	Spiky blue hair	Shiny gold coins
Isabella	Grapple Glove	Clockwork Beetle	Left-handed glove	Curly green hair	High-pitched whistles
Arthur	Gravity Boots	Mechanical Falcon	Right-handed glove	Curly green hair	High-pitched whistles
Jay	Wind Blaster	Bubble Octopus	Right-handed glove	Braided red hair	Shiny gold coins
Sally	Cloud Cloak	Mechanical Falcon	Right-handed glove	Curly green hair	High-pitched whistles
Nellie	Storm Shield	Bubble Octopus	Left-handed glove	Curly green hair	High-pitched whistles
Finn	Gravity Boots	Pygmy Dragon	Right-handed glove	Braided red hair	High-pitched whistles
Zane	Cloud Cloak	Cyber Squirrel	Right-handed glove	Curly green hair	High-pitched whistles

CLUE 1 Addition

The Sky-Islands are buzzing with news of the theft. To start our search, we need to add up the total weight of the fuel canisters loaded onto the explorer blimps this morning.

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

T			T											T				
8985	3000	2787	8985	3000	4241	2787	2905	2037	6188	2787	8317	8140	6188	8985	3000	4140	2097	2787
										T								
4140	8260	6920	8260	8260	2970	2787	6188	2423	8985	6188	5169	6920	8317					

$3379 + 5606 = \square \rightarrow \boxed{\text{T}}$	$956 + 2014 = \square \rightarrow \boxed{\text{L}}$	$1303 + 1697 = \square \rightarrow \boxed{\text{H}}$
$2096 + 3073 = \square \rightarrow \boxed{\text{P}}$	$1824 + 1081 = \square \rightarrow \boxed{\text{F}}$	$5476 + 2841 = \square \rightarrow \boxed{\text{S}}$
$1864 + 2276 = \square \rightarrow \boxed{\text{A}}$	$3224 + 5036 = \square \rightarrow \boxed{\text{B}}$	$801 + 1296 = \square \rightarrow \boxed{\text{V}}$
$1068 + 969 = \square \rightarrow \boxed{\text{D}}$	$5334 + 2806 = \square \rightarrow \boxed{\text{N}}$	$4001 + 2187 = \square \rightarrow \boxed{\text{O}}$
$977 + 1446 = \square \rightarrow \boxed{\text{C}}$	$1475 + 2766 = \square \rightarrow \boxed{\text{I}}$	$2118 + 4802 = \square \rightarrow \boxed{\text{U}}$
$1847 + 940 = \square \rightarrow \boxed{\text{E}}$		

Scratch space:

CLUE 2 Subtraction

Our tracker blimp is hot on the trail, but the sky-thief threw heavy cargo overboard to speed up. We must subtract the lost weight from our starting total to find our current weight.

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

T 3288	3439	7602	3128	2313	5043	T 3439	3288	5043	7733	3643	4638	7602	7411	3128	2313	2496	T 3288
7589	2107	5180	7733	7602	7725	T 3288	2107	T 3288	T 3288	3439	7602	5180	4837	7602	2496	7602	

$4070 - 782 = \square \rightarrow \boxed{T}$	$10416 - 2814 = \square \rightarrow \boxed{E}$	$8922 - 4085 = \square \rightarrow \boxed{C}$
$8430 - 3250 = \square \rightarrow \boxed{S}$	$5471 - 2975 = \square \rightarrow \boxed{N}$	$3444 - 5 = \square \rightarrow \boxed{H}$
$11195 - 3784 = \square \rightarrow \boxed{P}$	$8080 - 347 = \square \rightarrow \boxed{L}$	$10188 - 2599 = \square \rightarrow \boxed{W}$
$6845 - 1802 = \square \rightarrow \boxed{G}$	$3539 - 1226 = \square \rightarrow \boxed{I}$	$4528 - 2421 = \square \rightarrow \boxed{A}$
$12038 - 4313 = \square \rightarrow \boxed{F}$	$6928 - 2290 = \square \rightarrow \boxed{V}$	$3383 - 255 = \square \rightarrow \boxed{R}$
$8224 - 4581 = \square \rightarrow \boxed{O}$		

Scratch space:

CLUE 3

Multiplication facts (1-12)

The trail leads to a sector with several floating docks. Each dock has multiple storage crates stacked in equal rows. Let us multiply the rows to find the total number of crates we must search.

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

$$6 \times 10 = \boxed{} \rightarrow \boxed{\text{T}}$$

$$10 \times 11 = \boxed{} \rightarrow \boxed{\text{P}}$$

$$8 \times 10 = \boxed{} \rightarrow \boxed{0}$$

$9 \times 11 = \boxed{} \rightarrow \boxed{\text{R}}$

$8 \times 9 = \boxed{} \rightarrow \boxed{\text{C}}$

$$11 \times 1 = \boxed{} \rightarrow \boxed{}$$

$$4 \times 8 = \boxed{} \rightarrow \boxed{\text{E}}$$

$$2 \times 10 = \boxed{} \rightarrow \boxed{\mathbf{Y}}$$

$$8 \times 7 = \boxed{} \rightarrow \boxed{\text{L}}$$

$10 \times 7 = \boxed{} \rightarrow \boxed{\text{G}}$

$12 \times 10 = \boxed{} \rightarrow \boxed{\text{F}}$

$5 \times 5 = \boxed{} \rightarrow \boxed{\text{A}}$

$1 \times 4 = \square \rightarrow \mathbf{H}$

$7 \times 6 = \square \rightarrow \boxed{\mathbf{D}}$

$9 \times 6 = \square \rightarrow \mathbf{W}$

$12 \times 8 = \boxed{} \rightarrow \boxed{\mathbf{N}}$

$12 \times 1 = \boxed{} \rightarrow \boxed{\text{S}}$

$3 \times 9 = \square \rightarrow \boxed{\mathbf{M}}$

Scratch space:

CLUE 4

Multi-step word problems

A locked cipher box was dropped by the suspect. To unlock the brass gears, we have to solve a series of steps: doubling the sky-miles, subtracting the headwinds, and then adding our safety margin.

Solve each problem, then write its letter in the boxes to fill in the missing word.

A strand of C N H A I hair turned up at the scene.

60 66 39 83 59 44 39 86 86 39

Sky Scout collected 124 cloud crystals in the morning and 56 cloud crystals in the afternoon, then split them equally among 3 Aero-Explorer Squad. How many cloud crystals did each get?

Answer: → C

Sky Scout earned 8 map scrolls in each of 3 rounds, plus 37 bonus map scrolls. Then 2 map scrolls were lost. How many map scrolls are left?

Answer: → Y

Sky Scout collected 208 map scrolls in the morning and 41 map scrolls in the afternoon, then split them equally among 3 Aero-Explorer Squad. How many map scrolls did each get?

Answer: → L

There were 440 grappling hooks in all. 4 Aero-Explorer Squad used 24 grappling hooks each. The other 4 Aero-Explorer Squad shared the rest equally. How many grappling hooks did each of the other Aero-Explorer Squad get?

Answer: → E

There were 378 compasses in all. 27 compasses were set aside. The rest were shared equally among 9 Aero-Explorer Squad. How many compasses did each get?

Answer: → R

There were 368 grappling hooks in all. 1 Aero-Explorer Squad used 38 grappling hooks each. The other 5 Aero-Explorer Squad shared the rest equally. How many grappling hooks did each of the other Aero-Explorer Squad get?

Answer: → U

Sky Scout earned 5 grappling hooks in each of 5 rounds, plus 20 bonus grappling hooks. Then 1 grappling hooks were lost. How many grappling hooks are left?

Answer: → G

Scratch space:

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

We found a cache of stolen sky-relics hidden in a cloud bank. To return them safely to the museum, we need to divide the relics equally among our transport crates.

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:

$8 \div 1 = \boxed{}$

$42 \div 7 = \boxed{}$

$30 \div 6 = \boxed{}$

$10 \div 5 = \boxed{}$

$36 \div 12 = \boxed{}$

$40 \div 10 = \boxed{}$

$96 \div 8 = \boxed{}$

$66 \div 6 = \boxed{}$

$108 \div 12 = \boxed{}$

$70 \div 7 = \boxed{}$

$56 \div 8 = \boxed{}$

Step 2 - cross out the sentence with each answer:

1. The villain zoomed past on gravity boots, then sent a mechanical falcon to grab the map.
2. The villain fired a gust from a wind blaster, then used a cyber squirrel to hack the locks.
3. The villain fired a gust from a wind blaster, then sent a mechanical falcon to grab the map.
4. The villain zoomed past on gravity boots, then ordered a pygmy dragon to light the way.
5. The villain vanished inside a cloud cloak, then released a clockwork beetle to distract the crew.
6. The villain vanished inside a cloud cloak, then used a cyber squirrel to hack the locks.
7. The villain swung across using a grapple glove, then released a clockwork beetle to distract the crew.
8. The villain vanished inside a cloud cloak, then sent a mechanical falcon to grab the map.
9. The villain zoomed past on gravity boots, then commanded a bubble octopus to ink the windows.
10. The villain swung across using a grapple glove, then commanded a bubble octopus to ink the windows.
11. The villain blocked the guards with a storm shield, then ordered a pygmy dragon to light the way.
12. The villain swung across using a grapple glove, then sent a mechanical falcon to grab the map.

Answer Key

The Great Sky-Island Heist

Culprit: Arthur

Gravity Boots · Mechanical Falcon · Right-handed glove · Curly green hair · High-pitched whistles

Trail: Start 21 → Clue 1 16 → Clue 2 9 → Clue 3 7 → Clue 4 4 → Clue 5 1

Clue 1 (Addition): "THE THIEF DOES NOT HAVE A BUBBLE OCTOPUS"

$3379 + 5606 = 8985$ (T) · $956 + 2014 = 2970$ (L) · $1303 + 1697 = 3000$ (H) · $2096 + 3073 = 5169$ (P) · $1824 + 1081 = 2905$ (F) · $5476 + 2841 = 8317$ (S) · $1864 + 2276 = 4140$ (A) · $3224 + 5036 = 8260$ (B) · $801 + 1296 = 2097$ (V) · $1068 + 969 = 2037$ (D) · $5334 + 2806 = 8140$ (N) · $4001 + 2187 = 6188$ (O) · $977 + 1446 = 2423$ (C) · $1475 + 2766 = 4241$ (I) · $2118 + 4802 = 6920$ (U) · $1847 + 940 = 2787$ (E)

Clue 2 (Subtraction): "THE RIGHT GLOVE PRINT WAS LEFT AT THE SCENE"

$4070 - 782 = 3288$ (T) · $10416 - 2814 = 7602$ (E) · $8922 - 4085 = 4837$ (C) · $8430 - 3250 = 5180$ (S) · $5471 - 2975 = 2496$ (N) · $3444 - 5 = 3439$ (H) · $11195 - 3784 = 7411$ (P) · $8080 - 347 = 7733$ (L) · $10188 - 2599 = 7589$ (W) · $6845 - 1802 = 5043$ (G) · $3539 - 1226 = 2313$ (I) · $4528 - 2421 = 2107$ (A) · $12038 - 4313 = 7725$ (F) · $6928 - 2290 = 4638$ (V) · $3383 - 255 = 3128$ (R) · $8224 - 4581 = 3643$ (O)

Clue 3 (Multiplication facts (1-12)): "THEY RAN AWAY FROM HIGH PITCHED WHISTLES"

$6 \times 10 = 60$ (T) · $10 \times 11 = 110$ (P) · $8 \times 10 = 80$ (O) · $9 \times 11 = 99$ (R) · $8 \times 9 = 72$ (C) · $11 \times 1 = 11$ (I) · $4 \times 8 = 32$ (E) · $2 \times 10 = 20$ (Y) · $8 \times 7 = 56$ (L) · $10 \times 7 = 70$ (G) · $12 \times 10 = 120$ (F) · $5 \times 5 = 25$ (A) · $1 \times 4 = 4$ (H) · $7 \times 6 = 42$ (D) · $9 \times 6 = 54$ (W) · $12 \times 8 = 96$ (N) · $12 \times 1 = 12$ (S) · $3 \times 9 = 27$ (M)

Clue 4 (Multi-step word problems): "CURLY GREEN HAIR"

Sky Scout collected 124 cloud crystals in the morning and 56 cloud crystals in the afternoon, then split them equally among 3 Aero-Explorer Squad. How many cloud crystals did each get? = 60 (C) · Sky Scout earned 8 map scrolls in each of 3 rounds, plus 37 bonus map scrolls. Then 2 map scrolls were lost. How many map scrolls are left? = 59 (Y) · Sky Scout collected 208 map scrolls in the morning and 41 map scrolls in the afternoon, then split them equally among 3 Aero-Explorer Squad. How many map scrolls did each get? = 83 (L) · There were 440 grappling hooks in all. 4 Aero-Explorer Squad used 24 grappling hooks each. The other 4 Aero-Explorer Squad shared the rest equally. How many grappling hooks did each of the other Aero-Explorer Squad get? = 86 (E) · There were 378 compasses in all. 27 compasses were set aside. The rest were shared equally among 9 Aero-Explorer Squad. How many compasses did each get? = 39 (R) · There were 368 grappling hooks in all. 1 Aero-Explorer Squad used 38 grappling hooks each. The other 5 Aero-Explorer Squad shared the rest equally. How many grappling hooks did each of the other Aero-Explorer Squad get? = 66 (U) · Sky Scout earned 5 grappling hooks in each of 5 rounds, plus 20 bonus grappling hooks. Then 1 grappling hooks were lost. How many grappling hooks are left? = 44 (G)

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

$8 \div 1 = 8$ · $42 \div 7 = 6$ · $30 \div 6 = 5$ · $10 \div 5 = 2$ · $36 \div 12 = 3$ · $40 \div 10 = 4$ · $96 \div 8 = 12$ · $66 \div 6 = 11$ · $108 \div 12 = 9$ · $70 \div 7 = 10$ · $56 \div 8 = 7$