



The Sky Academy Airship Heist

Grade 5 math · Multiplication, Rounding, Place value, Bar models, Division · Reading level grades 5-6

Detective: _____ Date: _____

Someone raided the high vault at Sky Academy and grabbed the Golden Compass! Search the dock for clues to figure out which rogue flyer pulled off this daring airship heist.

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 Rogue Airship Captain is _____

Possible suspects

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

NAME	MAIN GEAR	SIDE GADGET	GLOVE STYLE	HAIRSTYLE	WEAKNESS
Dashiell Stratus	Glider Wings	Decoy Balloon	Right Handed Glove	Golden Braids	Bright Lantern
Victor Vector	Glider Wings	Flash Beacon	Right Handed Glove	Dark Ponytail	Strong Gust
Rowan Drift	Sky Cannon	Decoy Balloon	Left Handed Glove	Dark Ponytail	Bright Lantern
Jasper Cloud	Glider Wings	Smoke Bomb	Right Handed Glove	Dark Ponytail	Strong Gust
Wren Radar	Propeller Pack	Decoy Balloon	Left Handed Glove	Golden Braids	Bright Lantern
Nova Sterling	Grappling Hook	Smoke Bomb	Right Handed Glove	Dark Ponytail	Strong Gust
Gulliver Stone	Propeller Pack	Golden Net	Right Handed Glove	Dark Ponytail	Strong Gust
Piper Wright	Steam Jet	Flash Beacon	Left Handed Glove	Golden Braids	Strong Gust
Sienna Jet	Propeller Pack	Decoy Balloon	Right Handed Glove	Golden Braids	Bright Lantern
Captain Barnaby	Sky Cannon	Wind Whistle	Left Handed Glove	Silver Crew Cut	Bright Lantern
Talia Compass	Sky Cannon	Golden Net	Left Handed Glove	Silver Crew Cut	Loud Whistle
Felix Finch	Sky Cannon	Flash Beacon	Left Handed Glove	Dark Ponytail	Strong Gust
Beatrix Wing	Sky Cannon	Smoke Bomb	Right Handed Glove	Dark Ponytail	Strong Gust
Cora Breeze	Glider Wings	Smoke Bomb	Right Handed Glove	Silver Crew Cut	Strong Gust
Sterling Hawke	Grappling Hook	Wind Whistle	Right Handed Glove	Dark Ponytail	Bright Lantern
Orson Gale	Propeller Pack	Wind Whistle	Left Handed Glove	Dark Ponytail	Strong Gust
Valerie Vane	Grappling Hook	Wind Whistle	Right Handed Glove	Silver Crew Cut	Strong Gust
Iris Nimbus	Sky Cannon	Wind Whistle	Left Handed Glove	Golden Braids	Strong Gust
Zephyr Vance	Sky Cannon	Wind Whistle	Right Handed Glove	Golden Braids	Strong Gust
Leo Altitude	Sky Cannon	Flash Beacon	Right Handed Glove	Golden Braids	Loud Whistle
Skye Lindbergh	Steam Jet	Decoy Balloon	Right Handed Glove	Silver Crew Cut	Strong Gust

Multiplication facts (1-12)

You count rows of brass crates stacked inside the hangar to decode the first signal.

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

T																T
100	24	144	66	3	11	11	84	3	50	25	18	144	99	50	18	100
14	99	144	84	35	18	11	25	144	50	50	144	100				

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

$2 \times 7 = \boxed{} \rightarrow \boxed{\text{U}}$

$$6 \times 3 = \boxed{} \rightarrow \boxed{0}$$

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

$10 \times 5 = \boxed{} \rightarrow \boxed{\text{N}}$

$5 \times 5 = \square \rightarrow \mathbf{D}$

$11 \times 6 = \square \rightarrow \boxed{\mathbf{V}}$

$12 \times 2 = \boxed{} \rightarrow \boxed{\text{H}}$

$7 \times 12 = \square \rightarrow \mathbf{A}$

$5 \times 7 = \square \rightarrow \mathbf{G}$

$1 \times 3 = \boxed{} \rightarrow \boxed{1}$

$12 \times 12 = \boxed{} \rightarrow \boxed{\text{E}}$

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

Scratch space:

CLUE 2 Rounding

The navigation dashboard shows rounded altitude measurements that reveal the path taken.

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

T										T						
130	20	170	1300	500	1300	230	170	70	130	4300	170	50	370	1300	50	

				T											
370	2900	2300	20	130	20	50	290	200	170	200	2300	90	300	7000	170

Round 129 to the nearest ten → **T**

Round 6,990 to the nearest thousand → **V**

Round 289 to the nearest ten → **N**

Round 290 to the nearest hundred → **O**

Round 227 to the nearest ten → **P**

Round 2,869 to the nearest hundred → **I**

Round 70 to the nearest ten → **C**

Round 473 to the nearest hundred → **U**

Round 4,274 to the nearest hundred → **W**

Round 2,277 to the nearest hundred → **G**

Round 226 to the nearest hundred → **D**

Round 1,280 to the nearest hundred → **S**

Round 92 to the nearest ten → **L**

Round 374 to the nearest ten → **R**

Round 23 to the nearest ten → **H**

Round 49 to the nearest ten → **A**

Round 169 to the nearest ten → **E**

Scratch space:

CLUE 3
Place value

Analyzing the digit places on the vault lock keypad pinpoints a critical clue.

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

T																		
500	400	80	6000	700	8000	8000	2000	700	900	9000	2000	700	8000	20	700	900	2000	

	T								T
20	500	1000	4000	900	5000	5000	100	20	500

What is the value of the 5 in 70,526?

→

T

What is the value of the 2 in 668,523?

→

S

What is the value of the 1 in 241,869?

→

R

What is the value of the 1 in 67,197?

→

U

What is the value of the 2 in 362,661?

→

A

What is the value of the 9 in 339,844?

→

F

What is the value of the 6 in 306,770?

→

V

What is the value of the 8 in 75,989?

→

E

What is the value of the 4 in 83,492?

→

H

What is the value of the 5 in 35,884?

→

G

What is the value of the 4 in 84,209?

→

O

What is the value of the 8 in 98,769?

→

L

What is the value of the 7 in 59,749?

→

I

What is the value of the 9 in 33,950?

→

N

Scratch space:

CLUE 4

Bar model word problems

By comparing fuel levels on a bar model, you eliminate several suspect profiles.

Draw a bar model to solve each word problem, then write its letter in the boxes to fill in the missing word.

A strand of D Y T I L hair turned up at the scene.

62 45 94 139 111 64 59 45

One group collected 55 cloud crystals and another group collected 7 cloud crystals. How many cloud crystals in all?

draw a bar model

Answer: → D

Sky Scout has 135 compass needles, packed 3 to a bag. How many bags can be filled?

draw a bar model

Answer: → A

Sky Scout shares 128 airship valves equally among 2 teams. How many airship valves does each team get?

draw a bar model

Answer: → O

There were 78 compass needles in all. 19 compass needles were used. How many compass needles are left?

draw a bar model

Answer: → N

The red team has 115 compass needles and the blue team has 21 compass needles. How many more compass needles does the red team have?

draw a bar model

Answer: → R

Sky Scout has 222 airship valves, packed 2 to a bag. How many bags can be filled?

draw a bar model

Answer: → P

One group collected 116 airship valves and another group collected 23 airship valves. How many airship valves in all?

draw a bar model

Answer: → K

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

Dividing remaining sky rations equally among the guards uncovers the final note.

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:

$25 \div 5 = \boxed{}$

$24 \div 3 = \boxed{}$

$77 \div 11 = \boxed{}$

$54 \div 6 = \boxed{}$

$15 \div 5 = \boxed{}$

$144 \div 12 = \boxed{}$

$54 \div 9 = \boxed{}$

$24 \div 6 = \boxed{}$

$20 \div 10 = \boxed{}$

$70 \div 7 = \boxed{}$

$1 \div 1 = \boxed{}$

Step 2 - cross out the sentence with each answer:

1. The villain starts a propeller pack, then flashes a beacon.
2. The villain deploys glider wings, then launches a decoy balloon.
3. The villain starts a propeller pack, then throws a golden net.
4. The villain blasts a steam jet, then drops a smoke bomb.
5. The villain fires a grappling hook, then drops a smoke bomb.
6. The villain fires a grappling hook, then launches a decoy balloon.
7. The villain deploys glider wings, then flashes a beacon.
8. The villain deploys glider wings, then drops a smoke bomb.
9. The villain starts a propeller pack, then launches a decoy balloon.
10. The villain starts a propeller pack, then drops a smoke bomb.
11. The villain loads a sky cannon, then drops a smoke bomb.
12. The villain loads a sky cannon, then flashes a beacon.

Answer Key

The Sky Academy Airship Heist

Culprit: Beatrix Wing

Sky Cannon · Smoke Bomb · Right Handed Glove · Dark Ponytail · Strong Gust

Trail: Start 21 → Clue 1 19 → Clue 2 12 → Clue 3 8 → Clue 4 4 → Clue 5 1

Clue 1 (Multiplication facts (1-12)): "THE VILLAIN DOES NOT USE A GOLDEN NET"

$10 \times 10 = 100$ (T) · $2 \times 7 = 14$ (U) · $6 \times 3 = 18$ (O) · $9 \times 11 = 99$ (S) · $10 \times 5 = 50$ (N) · $5 \times 5 = 25$ (D) · $11 \times 6 = 66$ (V) · $12 \times 2 = 24$ (H) · $7 \times 12 = 84$ (A) · $5 \times 7 = 35$ (G) · $1 \times 3 = 3$ (I) · $12 \times 12 = 144$ (E) · $1 \times 11 = 11$ (L)

Clue 2 (Rounding): "THE SUSPECT WEARS A RIGHT HANDED GLOVE"

Round 129 to the nearest ten = 130 (T) · Round 6,990 to the nearest thousand = 7000 (V) · Round 289 to the nearest ten = 290 (N) · Round 290 to the nearest hundred = 300 (O) · Round 227 to the nearest ten = 230 (P) · Round 2,869 to the nearest hundred = 2900 (I) · Round 70 to the nearest ten = 70 (C) · Round 473 to the nearest hundred = 500 (U) · Round 4,274 to the nearest hundred = 4300 (W) · Round 2,277 to the nearest hundred = 2300 (G) · Round 226 to the nearest hundred = 200 (D) · Round 1,280 to the nearest hundred = 1300 (S) · Round 92 to the nearest ten = 90 (L) · Round 374 to the nearest ten = 370 (R) · Round 23 to the nearest ten = 20 (H) · Round 49 to the nearest ten = 50 (A) · Round 169 to the nearest ten = 170 (E)

Clue 3 (Place value): "THE VILLAIN FAILS IN A STRONG GUST"

What is the value of the 5 in 70,526? = 500 (T) · What is the value of the 2 in 668,523? = 20 (S) · What is the value of the 1 in 241,869? = 1000 (R) · What is the value of the 1 in 67,197? = 100 (U) · What is the value of the 2 in 362,661? = 2000 (A) · What is the value of the 9 in 339,844? = 9000 (F) · What is the value of the 6 in 306,770? = 6000 (V) · What is the value of the 8 in 75,989? = 80 (E) · What is the value of the 4 in 83,492? = 400 (H) · What is the value of the 5 in 35,884? = 5000 (G) · What is the value of the 4 in 84,209? = 4000 (O) · What is the value of the 8 in 98,769? = 8000 (L) · What is the value of the 7 in 59,749? = 700 (I) · What is the value of the 9 in 33,950? = 900 (N)

Clue 4 (Bar model word problems): "DARK PONYTAIL"

One group collected 55 cloud crystals and another group collected 7 cloud crystals. How many cloud crystals in all? = 62 (D) · Sky Scout has 135 compass needles, packed 3 to a bag. How many bags can be filled? = 45 (A) · Sky Scout shares 128 airship valves equally among 2 teams. How many airship valves does each team get? = 64 (O) · There were 78 compass needles in all. 19 compass needles were used. How many compass needles are left? = 59 (N) · The red team has 115 compass needles and the blue team has 21 compass needles. How many more compass needles does the red team have? = 94 (R) · Sky Scout has 222 airship valves, packed 2 to a bag. How many bags can be filled? = 111 (P) · One group collected 116 airship valves and another group collected 23 airship valves. How many airship valves in all? = 139 (K)

Clue 5 (Division facts (1-12)): surviving statement is box 11 → Beatrix Wing

$25 \div 5 = 5$ · $24 \div 3 = 8$ · $77 \div 11 = 7$ · $54 \div 6 = 9$ · $15 \div 5 = 3$ · $144 \div 12 = 12$ · $54 \div 9 = 6$ · $24 \div 6 = 4$ · $20 \div 10 = 2$ · $70 \div 7 = 10$ · $1 \div 1 = 1$