The Mystery of Cloudcrest Airship

Grade 5 math · Multiplication, Word problems, Multi-step word problems, Fractions of a number, Division · Reading level grades 3-4

Detective: _____ **Date:** _____

A mysterious Sky Bandit sneaked onto the Cloudcrest Flying Dock and snatched the Golden Star Chart right off the steering wheel! The Head Navigator needs your detective skills to figure out who took it before the airship sets sail.

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

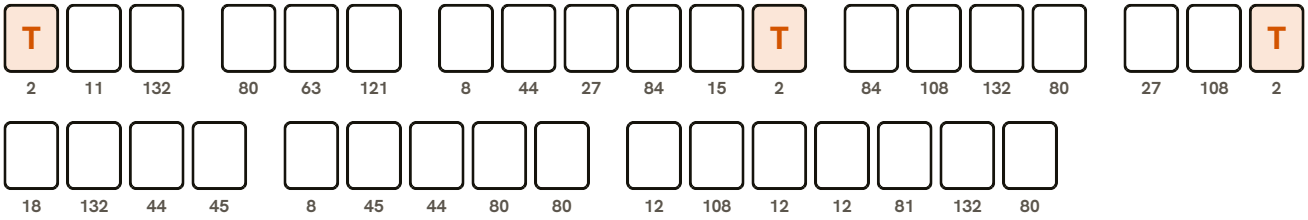
Cross off a row as each clue rules it out. The one left at the end is the culprit.

NAME	MAIN GADGET	EXTRA GEAR	DOMINANT HAND	HEADWEAR	SECRET FEAR
James Cook	Pocket Glider	Pocket Watch	Left Handed	Spiky Cap	Bright Flashlight
Marco Polo	Sky Binoculars	Map Case	Left Handed	Braided Ponytail	Bright Flashlight
Sally Ride	Grapple Hook	Signal Flare	Left Handed	Braided Ponytail	Bright Flashlight
Sacagawea	Sky Binoculars	Signal Flare	Left Handed	Spiky Cap	Bright Flashlight
Neil Armstrong	Brass Compass	Brass Goggles	Right Handed	Spiky Cap	Squeaky Toy
Tenzing Norgay	Pocket Glider	Map Case	Right Handed	Silver Wig	Loud Whistle
Ann Bancroft	Pocket Glider	Pocket Watch	Right Handed	Silver Wig	Bright Flashlight
Jacques Cousteau	Rescue Parachute	Signal Flare	Left Handed	Spiky Cap	Loud Whistle
Edmund Hillary	Pocket Glider	Map Case	Left Handed	Silver Wig	Loud Whistle
Sylvia Earle	Grapple Hook	Signal Flare	Left Handed	Braided Ponytail	Loud Whistle
Ibn Battuta	Pocket Glider	Leather Gloves	Left Handed	Spiky Cap	Squeaky Toy
Amelia Earhart	Sky Binoculars	Leather Gloves	Left Handed	Braided Ponytail	Squeaky Toy
Mae Jemison	Sky Binoculars	Map Case	Right Handed	Braided Ponytail	Bright Flashlight
Bessie Coleman	Grapple Hook	Leather Gloves	Right Handed	Silver Wig	Loud Whistle
Charles Lindbergh	Sky Binoculars	Pocket Watch	Left Handed	Spiky Cap	Squeaky Toy
Fridtjof Nansen	Sky Binoculars	Brass Goggles	Right Handed	Braided Ponytail	Loud Whistle
Ranulph Fiennes	Sky Binoculars	Leather Gloves	Right Handed	Spiky Cap	Loud Whistle
Wilbur Wright	Sky Binoculars	Leather Gloves	Left Handed	Braided Ponytail	Bright Flashlight
Robert Peary	Grapple Hook	Leather Gloves	Left Handed	Braided Ponytail	Squeaky Toy
Buzz Aldrin	Brass Compass	Brass Goggles	Left Handed	Braided Ponytail	Bright Flashlight
Orville Wright	Grapple Hook	Leather Gloves	Left Handed	Braided Ponytail	Bright Flashlight

CLUE 1 Multiplication facts (1-12)

> The airship deck has rows of cargo crates, and multiplying them helps reveal a dropped note.

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



2 × 1 = ☐ → T	11 × 11 = ☐ → Y	9 × 9 = ☐ → L
6 × 2 = ☐ → G	3 × 9 = ☐ → N	8 × 1 = ☐ → B
10 × 8 = ☐ → S		
12 × 11 = ☐ → E	2 × 9 = ☐ → W	11 × 1 = ☐ → H
3 × 5 = ☐ → I	12 × 7 = ☐ → D	5 × 9 = ☐ → R
12 × 9 = ☐ → O	7 × 9 = ☐ → K	4 × 11 = ☐ → A

Scratch space:

CLUE 2 Word problems

Explorer Sam checks the supply logs to see who bought adventure gear at the harbor.

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

A witness saw the villain was

L							D		D
73	76	108	91	7	27	59		76	

.

Sky scout found 23 cloud goggles yesterday and 50 more today. How many cloud goggles in all?

Answer: ☐ → L

Sky scout found 3 climbing ropes yesterday and 4 more today. How many climbing ropes in all?

Answer: ☐ → H

Sky scout found 12 climbing ropes yesterday and 15 more today. How many climbing ropes in all?

Answer: ☐ → A

Sky scout found 26 adventure boots yesterday and 50 more today. How many adventure boots in all?

Answer: ☐ → E

Sky scout lined up 12 rows of 9 brass compasses. How many brass compasses in all?

Answer: ☐ → F

Sky scout found 7 sky maps yesterday and 52 more today. How many sky maps in all?

Answer: ☐ → N

Sky scout found 72 adventure boots yesterday and 19 more today. How many adventure boots in all?

Answer: ☐ → T

Scratch space:

CLUE 3 Multi-step word problems

Navigating through the stormy clouds takes a few steps of math on the altitude charts.

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

Someone scared the villain off with

B							L	A	S		L					.
10	74	27	35	22	28	66				22		27	35	22	28	

There were 91 adventure boots in all. 21 adventure boots were set aside. The rest were shared equally among 7 Airship Crew. How many adventure boots did each get?

Answer: ☐ → **B**

Sky scout collected 37 adventure boots in the morning and 131 adventure boots in the afternoon, then split them equally among 6 Airship Crew. How many adventure boots did each get?

Answer: ☐ → **T**

There were 346 climbing ropes in all. 4 Airship Crew used 31 climbing ropes each. The other 3 Airship Crew shared the rest equally. How many climbing ropes did each of the other Airship Crew get?

Answer: ☐ → **R**

There were 163 adventure boots in all. 1 Airship Crew used 31 adventure boots each. The other 6 Airship Crew shared the rest equally. How many adventure boots did each of the other Airship Crew get?

Answer: ☐ → **H**

There were 210 cloud goggles in all. 1 Airship Crew used 35 cloud goggles each. The other 5 Airship Crew shared the rest equally. How many cloud goggles did each of the other Airship Crew get?

Answer: ☐ → **G**

There were 234 sky maps in all. 36 sky maps were set aside. The rest were shared equally among 3 Airship Crew. How many sky maps did each get?

Answer: ☐ → **F**

There were 166 adventure boots in all. 31 adventure boots were set aside. The rest were shared equally among 5 Airship Crew. How many adventure boots did each get?

Answer: ☐ → **I**

Scratch space:

CLUE 4 Fractions of a number

Only a fraction of the fuel canisters are full, so the crew counts them to spot a clue.

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

A			A										A				A		
7	34	13	7	35	12	14	12	30	33	32	16	38	7	35	17	20	7	8	

												A							
8	30	33	38	38	14	12	33	32	38	29	14	7	35	13	8	29	35	30	

7/8 of 8 = ☐ → A

2/10 of 65 = ☐ → R

5/10 of 34 = ☐ → L

1/3 of 99 = ☐ → O

1/3 of 36 = ☐ → D

1/6 of 48 = ☐ → S

1/4 of 116 = ☐ → H

5/10 of 28 = ☐ → E

1/4 of 136 = ☐ → B

2/6 of 105 = ☐ → I

1/6 of 180 = ☐ → P

4/6 of 24 = ☐ → Y

8/10 of 40 = ☐ → N

1/5 of 190 = ☐ → T

1/8 of 160 = ☐ → W

Scratch space:

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

> Splitting the rescued explorer badges equally among the team unlocks the sky safe.

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:

5 ÷ 1 = ☐	49 ÷ 7 = ☐	120 ÷ 12 = ☐	10 ÷ 10 = ☐	4 ÷ 1 = ☐
24 ÷ 8 = ☐	24 ÷ 4 = ☐	88 ÷ 11 = ☐	81 ÷ 9 = ☐	110 ÷ 10 = ☐
24 ÷ 2 = ☐				

Step 2 - cross out the sentence with each answer:

1. The villain scouted the sky through sky binoculars, then checked the time on a pocket watch.
2. The villain scouted the sky through sky binoculars, then rolled up a stolen map case.
3. The villain jumped safely down with a rescue parachute, then adjusted a pair of leather gloves.
4. The villain soared between cloud peaks on a pocket glider, then launched a bright signal flare.
5. The villain swung across the deck using a grapple hook, then launched a bright signal flare.
6. The villain jumped safely down with a rescue parachute, then checked the time on a pocket watch.
7. The villain scouted the sky through sky binoculars, then adjusted a pair of leather gloves.
8. The villain steered the airship using a brass compass, then rolled up a stolen map case.
9. The villain steered the airship using a brass compass, then adjusted a pair of leather gloves.
10. The villain swung across the deck using a grapple hook, then adjusted a pair of leather gloves.
11. The villain steered the airship using a brass compass, then fixed a pair of brass goggles.
12. The villain scouted the sky through sky binoculars, then fixed a pair of brass goggles.

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TEACHER / PARENT

Answer Key

The Mystery of Cloudcrest Airship

Culprit: Marco Polo

Sky Binoculars · Map Case · Left Handed · Braided Ponytail · Bright Flashlight

Trail: Start 21 → Clue 1 18 → Clue 2 13 → Clue 3 6 → Clue 4 4 → Clue 5 1

Clue 1 (Multiplication facts (1-12)): "THE SKY BANDIT DOES NOT WEAR BRASS GOGGLES"

2 × 1 = 2 (T) · 11 × 11 = 121 (Y) · 9 × 9 = 81 (L) · 6 × 2 = 12 (G) · 3 × 9 = 27 (N) · 8 × 1 = 8 (B) · 10 × 8 = 80 (S) · 12 × 11 = 132 (E) · 2 × 9 = 18 (W) · 11 × 1 = 11 (H) · 3 × 5 = 15 (I) · 12 × 7 = 84 (D) · 5 × 9 = 45 (R) · 12 × 9 = 108 (O) · 7 × 9 = 63 (K) · 4 × 11 = 44 (A)

Clue 2 (Word problems): "LEFT HANDED"

Sky scout found 23 cloud goggles yesterday and 50 more today. How many cloud goggles in all? = 73 (L) · Sky scout found 3 climbing ropes yesterday and 4 more today. How many climbing ropes in all? = 7 (H) · Sky scout found 12 climbing ropes yesterday and 15 more today. How many climbing ropes in all? = 27 (A) · Sky scout found 26 adventure boots yesterday and 50 more today. How many adventure boots in all? = 76 (E) · Sky scout lined up 12 rows of 9 brass compasses. How many brass compasses in all? = 108 (F) · Sky scout found 7 sky maps yesterday and 52 more today. How many sky maps in all? = 59 (N) · Sky scout found 72 adventure boots yesterday and 19 more today. How many adventure boots in all? = 91 (T)

Clue 3 (Multi-step word problems): "BRIGHT FLASHLIGHT"

There were 91 adventure boots in all. 21 adventure boots were set aside. The rest were shared equally among 7 Airship Crew. How many adventure boots did each get? = 10 (B) · Sky scout collected 37 adventure boots in the morning and 131 adventure boots in the afternoon, then split them equally among 6 Airship Crew. How many adventure boots did each get? = 28 (T) · There were 346 climbing ropes in all. 4 Airship Crew used 31 climbing ropes each. The other 3 Airship Crew shared the rest equally. How many climbing ropes did each of the other Airship Crew get? = 74 (R) · There were 163 adventure boots in all. 1 Airship Crew used 31 adventure boots each. The other 6 Airship Crew shared the rest equally. How many adventure boots did each of the other Airship Crew get? = 22 (H) · There were 210 cloud goggles in all. 1 Airship Crew used 35 cloud goggles each. The other 5 Airship Crew shared the rest equally. How many cloud goggles did each of the other Airship Crew get? = 35 (G) · There were 234 sky maps in all. 36 sky maps were set aside. The rest were shared equally among 3 Airship Crew. How many sky maps did each get? = 66 (F) · There were 166 adventure boots in all. 31 adventure boots were set aside. The rest were shared equally among 5 Airship Crew. How many adventure boots did each get? = 27 (I)

Clue 4 (Fractions of a number): "A BRAIDED PONYTAIL WAS SPOTTED ON THE AIRSHIP"

7/8 of 8 = 7 (A) · 2/10 of 65 = 13 (R) · 5/10 of 34 = 17 (L) · 1/3 of 99 = 33 (O) · 1/3 of 36 = 12 (D) · 1/6 of 48 = 8 (S) · 1/4 of 116 = 29 (H) · 5/10 of 28 = 14 (E) · 1/4 of 136 = 34 (B) · 2/6 of 105 = 35 (I) · 1/6 of 180 = 30 (P) · 4/6 of 24 = 16 (Y) · 8/10 of 40 = 32 (N) · 1/5 of 190 = 38 (T) · 1/8 of 160 = 20 (W)

Clue 5 (Division facts (1-12)): surviving statement is box 2 → Marco Polo

5 ÷ 1 = 5 · 49 ÷ 7 = 7 · 120 ÷ 12 = 10 · 10 ÷ 10 = 1 · 4 ÷ 1 = 4 · 24 ÷ 8 = 3 · 24 ÷ 4 = 6 · 88 ÷ 11 = 8 · 81 ÷ 9 = 9 · 110 ÷ 10 = 11 · 24 ÷ 2 = 12