



The Mystery of the Sky Fortress

Grade 4 math · Rounding, Word problems, Bar models, Addition, Division · Reading level grades 3-4

Detective: _____ **Date:** _____

A sneaky Sky Bandit snuck into Cloudbottom Haven and took the Golden Compass! Help the Airship Crew crack the clues and catch the intruder.

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	GADGET	VEHICLE	STANCE	SCARF COLOR	FEAR
Captain Barnaby	Sonic Whistle	Sky Skimmer	Left Handed	Crimson Red	Bright Flares
Gale Gordon	Grapple Hook	Sky Skimmer	Right Handed	Golden Yellow	Loud Whistles
Breeze Bella	Grapple Hook	Wind Hover	Left Handed	Golden Yellow	Bright Flares
Rudder Ricky	Glider Wings	Solar Jet	Left Handed	Golden Yellow	Loud Whistles
Skye Tracker	Flash Beacon	Wind Hover	Left Handed	Cobalt Blue	Loud Whistles
Jet Stream Jim	Flash Beacon	Solar Jet	Right Handed	Cobalt Blue	Bright Flares
Radar Ray	Sonic Whistle	Solar Jet	Right Handed	Crimson Red	Loud Whistles
Glider Gabe	Grapple Hook	Wind Hover	Left Handed	Cobalt Blue	Bright Flares
Stratus Sally	Glider Wings	Sky Skimmer	Left Handed	Cobalt Blue	Bright Flares
Flyer Felix	Glider Wings	Sky Skimmer	Right Handed	Crimson Red	Cold Drafts
Pilot Paige	Flash Beacon	Sky Skimmer	Right Handed	Golden Yellow	Loud Whistles
Stormy Sam	Smoke Bomb	Cloud Rover	Left Handed	Golden Yellow	Loud Whistles
Propeller Penny	Glider Wings	Sky Skimmer	Left Handed	Golden Yellow	Loud Whistles
Aero Archie	Flash Beacon	Solar Jet	Right Handed	Golden Yellow	Loud Whistles
Compass Cora	Smoke Bomb	Sky Skimmer	Right Handed	Cobalt Blue	Loud Whistles
Windy Wendy	Smoke Bomb	Aero Bike	Right Handed	Golden Yellow	Loud Whistles
Aviator Ava	Smoke Bomb	Solar Jet	Left Handed	Crimson Red	Loud Whistles
Navigator Ned	Flash Beacon	Sky Skimmer	Right Handed	Cobalt Blue	Loud Whistles
Gusty Grace	Flash Beacon	Wind Hover	Right Handed	Golden Yellow	Loud Whistles
Vector Vance	Smoke Bomb	Cloud Rover	Right Handed	Golden Yellow	Cold Drafts
Hover Hannah	Glider Wings	Aero Bike	Right Handed	Crimson Red	Bright Flares

CLUE 1

5

70 1700 2300 30 500 200 200 1300 500 370 2900 130 2300 90 370 130 70

7000 90 2300 1300 700 500 370 2900 1700 130 30 2300 170

Round 69 to the nearest ten $\rightarrow$ **T**

Round 1,271 to the nearest hundred → **A**

Round 128 to the nearest ten $\rightarrow$

Round 196 to the nearest hundred $\rightarrow$ **L**

Round 373 to the nearest ten $\rightarrow$ **N**

Round 744 to the nearest hundred $\rightarrow$ **W**

Round 33 to the nearest ten $\rightarrow$

Round 90 to the nearest ten → **S**

Round 171 to the nearest ten $\rightarrow$ **R**

Round 2,886 to the nearest hundred $\rightarrow$ **D**

Round 7,496 to the nearest thousand $\rightarrow$

Round 2,324 to the nearest hundred → **E**

Round 1,707 to the nearest hundred → **H**

Round 479 to the nearest hundred $\rightarrow$

Scratch space:

CLUE 2

Word problems

The crew solved cargo word problems to gather clues from the harbor.

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

A witness saw the villain was R D E D .

11 23 49 33 65 33 70 48

There were 45 spyglasses. 34 were used up. How many spyglasses are left?

Answer: → R

There were 58 goggles. 9 were used up. How many goggles are left?

Answer: → G

There were 35 goggles. 12 were used up. How many goggles are left?

Answer: → I

Sky Scout lined up 3 rows of 11 goggles. How many goggles in all?

Answer: → H

Sky Scout lined up 6 rows of 8 goggles. How many goggles in all?

Answer: → N

Sky Scout found 18 spyglasses yesterday and 47 more today. How many spyglasses in all?

Answer: → T

Sky Scout lined up 10 rows of 7 maps. How many maps in all?

Answer: → A

Scratch space:

CLUE 3

Bar model word problems

The altimeter screen only displays rounded cloud heights.

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

Someone scared the villain off with

L

S
T
L
E
S

Sky Scout has 5 times as many goggles as a teammate. The teammate has 11 goggles. How many goggles does Sky Scout have?

draw a bar model

Answer: → L

The red team has 152 maps and the blue team has 13 maps. How many more maps does the red team have?

draw a bar model

Answer: → O

Sky Scout has 8 times as many compasses as a teammate. The teammate has 9 compasses. How many compasses does Sky Scout have?

draw a bar model

Answer: → D

Sky Scout used $\frac{1}{2}$ of the goggles on the first day. The other 43 goggles were used the next day. How many goggles were there in all?

draw a bar model

Answer: → W

There were 30 compasses in all. 4 compasses were used. How many compasses are left?

draw a bar model

Answer: → I

There were 127 lanterns in all. 5 lanterns were used. How many lanterns are left?

draw a bar model

Answer: → U

Sky Scout has 116 lanterns, packed 2 to a bag. How many bags can be filled?

draw a bar model

Answer: → H

CLUE 4 Addition

We added up all the fuel canisters found near the landing pad.

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

F																	
2543	2928	6166	6928	8175	3339	6431	2928	3125	8175	3733	6928	2828	3733	3125	3125	2928	6756

				F						
3556	6102	3339	8256	2543	5260	4727	8256	3733	3339	8175

$$826 + 1717 = \boxed{} \rightarrow \boxed{\text{F}}$$

$$2317 + 1239 = \boxed{} \rightarrow \boxed{\text{S}}$$

$$1605 + 1223 = \boxed{} \rightarrow \boxed{\text{Y}}$$

$$2647 + 5528 = \boxed{} \rightarrow \boxed{\text{D}}$$

$$3873 + 3055 = \boxed{} \rightarrow \boxed{\text{N}}$$

$$3024 + 3732 = \boxed{} \rightarrow \boxed{\text{W}}$$

$$2471 + 2789 = \boxed{} \rightarrow \boxed{\text{T}}$$

$$1926 + 1199 = \boxed{} \rightarrow \boxed{\text{L}}$$

$$4485 + 1946 = \boxed{} \rightarrow \boxed{\text{G}}$$

$$1517 + 1411 = \boxed{} \rightarrow \boxed{\text{O}}$$

$$2812 + 3290 = \boxed{} \rightarrow \boxed{\text{C}}$$

$$1392 + 2341 = \boxed{} \rightarrow \boxed{\text{E}}$$

$$4170 + 4086 = \boxed{} \rightarrow \boxed{\text{R}}$$

$$2328 + 2399 = \boxed{} \rightarrow \boxed{\text{H}}$$

$$2763 + 3403 = \boxed{} \rightarrow \boxed{\text{U}}$$

$$1967 + 1372 = \boxed{} \rightarrow \boxed{\text{A}}$$

Scratch space:

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

The team divided the leftover air maps equally among the scouts.

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:

$84 \div 12 = \boxed{}$

$84 \div 7 = \boxed{}$

$24 \div 12 = \boxed{}$

$70 \div 7 = \boxed{}$

$32 \div 4 = \boxed{}$

$11 \div 11 = \boxed{}$

$33 \div 3 = \boxed{}$

$6 \div 2 = \boxed{}$

$25 \div 5 = \boxed{}$

$18 \div 2 = \boxed{}$

$6 \div 1 = \boxed{}$

Step 2 - cross out the sentence with each answer:

1. The villain flew glider wings, then jetted away on a solar jet.
2. The villain lit a flash beacon, then jetted away on a solar jet.
3. The villain dropped a smoke bomb, then drove off in a cloud rover.
4. The villain lit a flash beacon, then escaped on a sky skimmer.
5. The villain blew a sonic whistle, then escaped on a sky skimmer.
6. The villain fired a grapple hook, then sped off on an aero bike.
7. The villain dropped a smoke bomb, then sped off on an aero bike.
8. The villain fired a grapple hook, then zoomed away on a wind hover.
9. The villain blew a sonic whistle, then zoomed away on a wind hover.
10. The villain lit a flash beacon, then zoomed away on a wind hover.
11. The villain lit a flash beacon, then drove off in a cloud rover.
12. The villain fired a grapple hook, then escaped on a sky skimmer.

Answer Key

The Mystery of the Sky Fortress

Culprit: Pilot Paige

Flash Beacon · Sky Skimmer · Right Handed · Golden Yellow · Loud Whistles

Trail: Start 21 → Clue 1 17 → Clue 2 11 → Clue 3 7 → Clue 4 4 → Clue 5 1

Clue 1 (Rounding): "THE VILLAIN DOES NOT USE A WIND HOVER"

Round 69 to the nearest ten = 70 (T) · Round 1,271 to the nearest hundred = 1300 (A) · Round 128 to the nearest ten = 130 (O) · Round 196 to the nearest hundred = 200 (L) · Round 373 to the nearest ten = 370 (N) · Round 744 to the nearest hundred = 700 (W) · Round 33 to the nearest ten = 30 (V) · Round 90 to the nearest ten = 90 (S) · Round 171 to the nearest ten = 170 (R) · Round 2,886 to the nearest hundred = 2900 (D) · Round 7,496 to the nearest thousand = 7000 (U) · Round 2,324 to the nearest hundred = 2300 (E) · Round 1,707 to the nearest hundred = 1700 (H) · Round 479 to the nearest hundred = 500 (I)

Clue 2 (Word problems): "RIGHT HANDED"

There were 45 spyglasses. 34 were used up. How many spyglasses are left? = 11 (R) · There were 58 goggles. 9 were used up. How many goggles are left? = 49 (G) · There were 35 goggles. 12 were used up. How many goggles are left? = 23 (I) · Sky Scout lined up 3 rows of 11 goggles. How many goggles in all? = 33 (H) · Sky Scout lined up 6 rows of 8 goggles. How many goggles in all? = 48 (N) · Sky Scout found 18 spyglasses yesterday and 47 more today. How many spyglasses in all? = 65 (T) · Sky Scout lined up 10 rows of 7 maps. How many maps in all? = 70 (A)

Clue 3 (Bar model word problems): "LOUD WHISTLES"

Sky Scout has 5 times as many goggles as a teammate. The teammate has 11 goggles. How many goggles does Sky Scout have? = 55 (L) · The red team has 152 maps and the blue team has 13 maps. How many more maps does the red team have? = 139 (O) · Sky Scout has 8 times as many compasses as a teammate. The teammate has 9 compasses. How many compasses does Sky Scout have? = 72 (D) · Sky Scout used $\frac{1}{2}$ of the goggles on the first day. The other 43 goggles were used the next day. How many goggles were there in all? = 86 (W) · There were 30 compasses in all. 4 compasses were used. How many compasses are left? = 26 (I) · There were 127 lanterns in all. 5 lanterns were used. How many lanterns are left? = 122 (U) · Sky Scout has 116 lanterns, packed 2 to a bag. How many bags can be filled? = 58 (H)

Clue 4 (Addition): "FOUND A GOLDEN YELLOW SCARF THREAD"

$826 + 1717 = 2543$ (F) · $2317 + 1239 = 3556$ (S) · $1605 + 1223 = 2828$ (Y) · $2647 + 5528 = 8175$ (D) · $3873 + 3055 = 6928$ (N) · $3024 + 3732 = 6756$ (W) · $2471 + 2789 = 5260$ (T) · $1926 + 1199 = 3125$ (L) · $4485 + 1946 = 6431$ (G) · $1517 + 1411 = 2928$ (O) · $2812 + 3290 = 6102$ (C) · $1392 + 2341 = 3733$ (E) · $4170 + 4086 = 8256$ (R) · $2328 + 2399 = 4727$ (H) · $2763 + 3403 = 6166$ (U) · $1967 + 1372 = 3339$ (A)

Clue 5 (Division facts (1-12)): surviving statement is box 4 → Pilot Paige

$84 \div 12 = 7$ · $84 \div 7 = 12$ · $24 \div 12 = 2$ · $70 \div 7 = 10$ · $32 \div 4 = 8$ · $11 \div 11 = 1$ · $33 \div 3 = 11$ · $6 \div 2 = 3$ · $25 \div 5 = 5$ · $18 \div 2 = 9$ · $6 \div 1 = 6$