



The Sky-Islands Heist

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

Detective: _____ **Date:** _____

The legendary Golden Propeller has been snatched from the Grand Airship! The Chief Mechanic needs our help. By analyzing the clues left behind on the floating islands, we can identify the Rogue Sky Pirate before they escape into the deep clouds.

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 Sky Pirate is _____

Possible suspects

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

NAME	ESCAPE GEAR	NAVIGATION TOOL	GEAR BELT STYLE	HEADWEAR FOUND	PHYSICAL HURDLE
Jim Hawkins	smoke bomb	wind gauge	left-handed belt	welding goggles	afraid of heights
Bessie Coleman	glider wing	brass compass	right-handed belt	feathered cap	gets seasick easily
Nancy Drew	jetpack boot	signal flare	left-handed belt	welding goggles	afraid of heights
Sally Ride	glider wing	wind gauge	right-handed belt	feathered cap	afraid of heights
Steve Irwin	smoke bomb	pocket watch	right-handed belt	feathered cap	allergic to pine needles
Robin Hood	magnetic glove	pocket watch	right-handed belt	feathered cap	gets seasick easily
Orville Wright	smoke bomb	signal flare	left-handed belt	feathered cap	afraid of heights
Amelia Earhart	glider wing	wind gauge	right-handed belt	welding goggles	afraid of heights
Sinbad	smoke bomb	spyglass	right-handed belt	feathered cap	gets seasick easily
Joe Hardy	jetpack boot	signal flare	left-handed belt	feathered cap	afraid of heights
Phileas Fogg	smoke bomb	signal flare	left-handed belt	leather aviator helmet	afraid of heights
Bear Grylls	grappling hook	spyglass	left-handed belt	welding goggles	afraid of heights
Lara Croft	glider wing	spyglass	left-handed belt	feathered cap	afraid of heights
Wilbur Wright	glider wing	spyglass	left-handed belt	leather aviator helmet	afraid of heights
Captain Nemo	jetpack boot	wind gauge	right-handed belt	welding goggles	allergic to pine needles
Charles Lindbergh	magnetic glove	signal flare	right-handed belt	leather aviator helmet	gets seasick easily
Marco Polo	grappling hook	brass compass	right-handed belt	leather aviator helmet	gets seasick easily
Nellie Bly	magnetic glove	spyglass	left-handed belt	feathered cap	allergic to pine needles
Robinson Crusoe	jetpack boot	brass compass	left-handed belt	feathered cap	afraid of heights
Wendy Darling	jetpack boot	brass compass	left-handed belt	leather aviator helmet	afraid of heights
Frank Hardy	jetpack boot	wind gauge	left-handed belt	feathered cap	afraid of heights

Multiplication facts (1-12)

We found the pirate's cargo hold, filled with supply crates stacked in equal rows. Multiply the rows of crates to find the code that unlocks the first logbook.

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

16 80 15 36 25 36 21 15 20 16 120 108 15 36 50 108 16

20 144 11 11 7 144 90 11 144 36 36 20 108 54 21 144 36 36

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

$$12 \times 9 = \boxed{} \rightarrow \boxed{0}$$

$$3 \times 5 = \boxed{} \rightarrow \boxed{\text{E}}$$

$6 \times 9 = \square \rightarrow \boxed{\mathbf{M}}$

$5 \times 5 =$ $\rightarrow$ **U**

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

$7 \times 3 = \boxed{} \rightarrow \boxed{\text{P}}$

$9 \times 10 = \boxed{} \rightarrow \boxed{\mathbf{B}}$

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

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

$12 \times 12 = \boxed{} \rightarrow \boxed{\mathbf{A}}$

$8 \times 10 = \boxed{} \rightarrow \boxed{\text{H}}$

$12 \times 3 = \square \rightarrow \mathbf{S}$

$1 \times 7 = \boxed{} \rightarrow \boxed{\text{Y}}$

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

Scratch space:

CLUE 2
Fractions of a number

Inside the logbook, we see a map of the floating islands. Only a fraction of these islands are safe to land on.
Work out the fraction of the total islands to find the correct coordinates.

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

T						T									T	
23	39	6	34	6	17	23	39	14	36	16	6	16	8	6	34	23
						T		T	T							
33	14	32	34	6	17	23	14	23	23	39	6	32	5	6	36	6

$1/5 \text{ of } 115 = \square \rightarrow \text{ **T** }$

$6/8 \text{ of } 44 = \square \rightarrow \text{ **W** }$

$1/2 \text{ of } 34 = \square \rightarrow \text{ **F** }$

$2/6 \text{ of } 24 = \square \rightarrow \text{ **B** }$

$2/6 \text{ of } 117 = \square \rightarrow \text{ **H** }$

$4/8 \text{ of } 68 = \square \rightarrow \text{ **L** }$

$8/10 \text{ of } 40 = \square \rightarrow \text{ **S** }$

$1/10 \text{ of } 140 = \square \rightarrow \text{ **A** }$

$3/6 \text{ of } 32 = \square \rightarrow \text{ **D** }$

$2/6 \text{ of } 18 = \square \rightarrow \text{ **E** }$

$4/8 \text{ of } 10 = \square \rightarrow \text{ **C** }$

$2/6 \text{ of } 108 = \square \rightarrow \text{ **N** }$

Scratch space:

CLUE 3
Order of operations

The ship's control panel has a complicated lock. Solve the multi-step equation using the correct order of operations to power up the navigation screen.

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

T																			
41	65	70	79	18	51	51	30	18	17	39	70	30	60	74	65	18	21	65	
75	51	30	11	70	74	30	17	50	11	51	18	39	39	74					

$25 + 8 \times 2 = \square \rightarrow \boxed{\text{T}}$

$6 \times 11 - 1 = \square \rightarrow \boxed{\text{H}}$

$11 \times 8 - 9 = \square \rightarrow \boxed{\text{V}}$

$11 \times 8 - 18 = \square \rightarrow \boxed{\text{E}}$

$65 + 2 \times 5 = \square \rightarrow \boxed{\text{P}}$

$6 \times 12 - 21 = \square \rightarrow \boxed{\text{L}}$

$15 + 5 \times 3 = \square \rightarrow \boxed{\text{A}}$

$42 + 2 \times 9 = \square \rightarrow \boxed{\text{R}}$

$10 \times 3 - 12 = \square \rightarrow \boxed{\text{I}}$

$3 \times 7 - 10 = \square \rightarrow \boxed{\text{C}}$

$20 + 6 \times 9 = \square \rightarrow \boxed{\text{S}}$

$5 + 4 \times 4 = \square \rightarrow \boxed{\text{G}}$

$10 \times 5 - 11 = \square \rightarrow \boxed{\text{F}}$

$2 \times 12 - 7 = \square \rightarrow \boxed{\text{N}}$

$10 \times 6 - 10 = \square \rightarrow \boxed{\text{D}}$

Scratch space:

CLUE 4 Rounding

Our cloud-radar is scanning for the runaway ship, but the system only displays rounded distances. Round the radar readings to the nearest hundred to pinpoint their direction.

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

A			A									A		A			A	
4300	700	5000	4300	1300	3000	5000	900	700	900	2300	500	4300	300	4300	1100	290	4300	50
700	2300	1700	9000	2000	2300	9000	1300	3000	5000	2000	5000	300	230					

Round 4,284 to the nearest hundred → **A**

Round 1,284 to the nearest hundred → **T**

Round 479 to the nearest hundred → **M**

Round 9,344 to the nearest thousand → **N**

Round 287 to the nearest ten → **W**

Round 695 to the nearest hundred → **F**

Round 3,035 to the nearest thousand → **H**

Round 231 to the nearest ten → **K**

Round 856 to the nearest hundred → **R**

Round 2,337 to the nearest hundred → **O**

Round 346 to the nearest hundred → **C**

Round 4,598 to the nearest thousand → **E**

Round 47 to the nearest ten → **S**

Round 2,109 to the nearest thousand → **D**

Round 1,700 to the nearest hundred → **U**

Round 1,059 to the nearest hundred → **P**

Scratch space:

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

To bribe the cloud-gull messengers for info, we must divide our bag of shiny gears equally among them.
Calculate how many gears each gull receives to get their secret report.

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:

$30 \div 3 = \boxed{}$

$81 \div 9 = \boxed{}$

$32 \div 4 = \boxed{}$

$70 \div 10 = \boxed{}$

$88 \div 8 = \boxed{}$

$132 \div 11 = \boxed{}$

$2 \div 2 = \boxed{}$

$12 \div 6 = \boxed{}$

$60 \div 10 = \boxed{}$

$45 \div 9 = \boxed{}$

$15 \div 5 = \boxed{}$

Step 2 - cross out the sentence with each answer:

1. The villain scaled the metallic hull with a magnetic glove, then after firing a bright red signal flare.
2. The villain escaped in a cloud of smoke from a smoke bomb, then while navigating without a brass compass.
3. The villain swung across the deck using a grappling hook, then while keeping perfect time with a pocket watch.
4. The villain zoomed over the clouds with a jetpack boot, then after checking the wind speed with a wind gauge.
5. The villain swung across the deck using a grappling hook, then while checking the horizon with a spyglass.
6. The villain escaped in a cloud of smoke from a smoke bomb, then while checking the horizon with a spyglass.
7. The villain zoomed over the clouds with a jetpack boot, then while checking the horizon with a spyglass.
8. The villain zoomed over the clouds with a jetpack boot, then after firing a bright red signal flare.
9. The villain glided silently away using a glider wing, then while checking the horizon with a spyglass.
10. The villain escaped in a cloud of smoke from a smoke bomb, then after firing a bright red signal flare.
11. The villain escaped in a cloud of smoke from a smoke bomb, then while keeping perfect time with a pocket watch.
12. The villain scaled the metallic hull with a magnetic glove, then while keeping perfect time with a pocket watch.

Answer Key

The Sky-Islands Heist

Culprit: Frank Hardy

jetpack boot · wind gauge · left-handed belt · feathered cap · afraid of heights

Trail: Start 21 → Clue 1 17 → Clue 2 10 → Clue 3 9 → Clue 4 4 → Clue 5 1

Clue 1 (Multiplication facts (1-12)): "THE SUSPECT DOES NOT CARRY A BRASS COMPASS"

$8 \times 2 = 16$ (T) · $12 \times 9 = 108$ (O) · $3 \times 5 = 15$ (E) · $6 \times 9 = 54$ (M) · $5 \times 5 = 25$ (U) · $10 \times 12 = 120$ (D) · $7 \times 3 = 21$ (P) · $9 \times 10 = 90$ (B) · $10 \times 5 = 50$ (N) · $2 \times 10 = 20$ (C) · $12 \times 12 = 144$ (A) · $8 \times 10 = 80$ (H) · $12 \times 3 = 36$ (S) · $1 \times 7 = 7$ (Y) · $11 \times 1 = 11$ (R)

Clue 2 (Fractions of a number): "THE LEFT HANDED BELT WAS LEFT AT THE SCENE"

$\frac{1}{5}$ of 115 = 23 (T) · $\frac{6}{8}$ of 44 = 33 (W) · $\frac{1}{2}$ of 34 = 17 (F) · $\frac{2}{6}$ of 24 = 8 (B) · $\frac{2}{6}$ of 117 = 39 (H) · $\frac{4}{8}$ of 68 = 34 (L) · $\frac{8}{10}$ of 40 = 32 (S) · $\frac{1}{10}$ of 140 = 14 (A) · $\frac{3}{6}$ of 32 = 16 (D) · $\frac{2}{6}$ of 18 = 6 (E) · $\frac{4}{8}$ of 10 = 5 (C) · $\frac{2}{6}$ of 108 = 36 (N)

Clue 3 (Order of operations): "THE VILLAIN FEARS HIGH PLACES AND CLIFFS"

$25 + 8 \times 2 = 41$ (T) · $6 \times 11 - 1 = 65$ (H) · $11 \times 8 - 9 = 79$ (V) · $11 \times 8 - 18 = 70$ (E) · $65 + 2 \times 5 = 75$ (P) · $6 \times 12 - 21 = 51$ (L) · $15 + 5 \times 3 = 30$ (A) · $42 + 2 \times 9 = 60$ (R) · $10 \times 3 - 12 = 18$ (I) · $3 \times 7 - 10 = 11$ (C) · $20 + 6 \times 9 = 74$ (S) · $5 + 4 \times 4 = 21$ (G) · $10 \times 5 - 11 = 39$ (F) · $2 \times 12 - 7 = 17$ (N) · $10 \times 6 - 10 = 50$ (D)

Clue 4 (Rounding): "A FEATHER FROM A CAP WAS FOUND ON THE DECK"

Round 4,284 to the nearest hundred = 4300 (A) · Round 1,284 to the nearest hundred = 1300 (T) · Round 479 to the nearest hundred = 500 (M) · Round 9,344 to the nearest thousand = 9000 (N) · Round 287 to the nearest ten = 290 (W) · Round 695 to the nearest hundred = 700 (F) · Round 3,035 to the nearest thousand = 3000 (H) · Round 231 to the nearest ten = 230 (K) · Round 856 to the nearest hundred = 900 (R) · Round 2,337 to the nearest hundred = 2300 (O) · Round 346 to the nearest hundred = 300 (C) · Round 4,598 to the nearest thousand = 5000 (E) · Round 47 to the nearest ten = 50 (S) · Round 2,109 to the nearest thousand = 2000 (D) · Round 1,700 to the nearest hundred = 1700 (U) · Round 1,059 to the nearest hundred = 1100 (P)

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

$30 \div 3 = 10$ · $81 \div 9 = 9$ · $32 \div 4 = 8$ · $70 \div 10 = 7$ · $88 \div 8 = 11$ · $132 \div 11 = 12$ · $2 \div 2 = 1$ · $12 \div 6 = 2$ · $60 \div 10 = 6$ · $45 \div 9 = 5$ · $15 \div 5 = 3$