



The Cloud Haven Map Caper

Grade 5 math · Multiplication, Word problems, Fractions of a number, Order of operations, Division · Reading level grades 3-4

Detective: _____ **Date:** _____

Someone has raided the grand archives of Cloud Haven! The legendary Sky-Pirate snuck past the wind turbines and took the master map of the floating islands. As a rookie agent of the Cloud Patrol, you must trace the clues, solve the math puzzles, and find the culprit before they sail away into the sunset.

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-Pirate is _____

Possible suspects

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

NAME	PRIMARY SKILL	SPECIAL TOOL	GOGGLES COLOR	HAIR COLOR	MAIN WEAKNESS
Wendy	climbing ropes	mechanical owl companion	brass goggles	dusty brown hair	fear of heights
Leo	flying a glider	spark blaster gun	silver goggles	dusty brown hair	ticklishness from feathers
Zack	reading old maps	signal lantern	silver goggles	dusty brown hair	fear of heights
Pip	steering the ship	wind gauge tool	silver goggles	bright orange hair	fear of heights
Hugo	steering the ship	wind gauge tool	silver goggles	snow white hair	sneezing from cloud pollen
Flynn	climbing ropes	mechanical owl companion	silver goggles	dusty brown hair	fear of heights
Cora	fixing steam engines	spark blaster gun	silver goggles	dusty brown hair	fear of heights
Ivy	climbing ropes	signal lantern	silver goggles	dusty brown hair	fear of heights
Toby	fixing steam engines	wind gauge tool	silver goggles	dusty brown hair	fear of heights
Sadie	steering the ship	signal lantern	brass goggles	snow white hair	fear of heights
Cleo	climbing ropes	mechanical owl companion	silver goggles	bright orange hair	fear of heights
Kira	fixing steam engines	spark blaster gun	brass goggles	snow white hair	sneezing from cloud pollen
Jax	reading old maps	wind gauge tool	brass goggles	bright orange hair	ticklishness from feathers
Ruby	climbing ropes	spark blaster gun	silver goggles	bright orange hair	fear of heights
Maya	reading old maps	wind gauge tool	silver goggles	dusty brown hair	ticklishness from feathers
Elsa	climbing ropes	signal lantern	silver goggles	snow white hair	fear of heights
Gemma	reading old maps	pocket glider tool	brass goggles	dusty brown hair	ticklishness from feathers
Barnaby	flying a glider	spark blaster gun	silver goggles	dusty brown hair	sneezing from cloud pollen
Otis	fixing steam engines	mechanical owl companion	silver goggles	snow white hair	sneezing from cloud pollen
Dash	steering the ship	mechanical owl companion	silver goggles	snow white hair	ticklishness from feathers
Alma	flying a glider	signal lantern	brass goggles	bright orange hair	fear of heights

Multiplication facts (1-12)

We found the map room in a mess. The pirate knocked over stacks of supply crates. They were arranged in neat rows. If we multiply the rows, we can count the missing crates.

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

80 10 55 84 25 84 44 55 63 80 66 2 55 84 54 2 80

10 32 120 55 32 84 44 32 144 48 90 1 32 84 80 55 144

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

$$2 \times 1 = \boxed{} \rightarrow \boxed{0}$$

$$4 \times 12 = \boxed{} \rightarrow \boxed{\text{K}}$$

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

$1 \times 1 = \square \rightarrow \boxed{\mathbf{L}}$

$$5 \times 5 = \boxed{} \rightarrow \boxed{\mathbf{U}}$$

$11 \times 4 = \boxed{} \rightarrow \boxed{\text{P}}$

$6 \times 11 = \boxed{} \rightarrow \boxed{\text{D}}$

$2 \times 5 = \boxed{} \rightarrow \mathbf{H}$

$9 \times 7 = \boxed{} \rightarrow \boxed{\text{C}}$

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

$9 \times 6 = \boxed{} \rightarrow \boxed{\text{N}}$

$11 \times 5 = \boxed{} \rightarrow \mathbf{E}$

$8 \times 4 = \boxed{} \rightarrow \boxed{\mathbf{A}}$

$$12 \times 10 = \boxed{} \rightarrow \mathbf{v}$$

$$7 \times 12 = \boxed{} \rightarrow \boxed{\text{S}}$$

Scratch space:

CLUE 2

Word problems

A witness saw someone running toward the docks. They dropped a notebook full of word problems about flight times. We need to solve the word problems to find where they went.

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

A witness saw the villain was S O S .

89 41 23 45 106 96 7 7 7 23 106 89

There were 106 sky-maps. 17 were used up. How many sky-maps are left?

Answer: → S

There were 27 grappling ropes. 4 were used up. How many grappling ropes are left?

Answer: → L

Captain Copter found 68 brass gears yesterday and 28 more today. How many brass gears in all?

Answer: → R

Captain Copter found 18 brass gears yesterday and 88 more today. How many brass gears in all?

Answer: → E

Captain Copter found 35 brass gears yesterday and 6 more today. How many brass gears in all?

Answer: → I

Captain Copter lined up 9 rows of 5 spyglass lenses. How many spyglass lenses in all?

Answer: → V

There were 30 sky-maps. 23 were used up. How many sky-maps are left?

Answer: → G

Scratch space:

CLUE 3

Fractions of a number

The escape ship leaked some fuel on the wooden deck. Only a small fraction of the fuel tank is empty. We can calculate the exact fraction to find out how far they can fly.

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

T			T						T										
20	31	27	20	26	23	32	27	20	19	27	26	23	3	31	15	32	31		
40	30	26	8	27	3														

$2/8$ of 80 = → T	$2/8$ of 76 = → F	$2/4$ of 62 = → H
$1/4$ of 120 = → L	$6/8$ of 36 = → E	$1/5$ of 40 = → C
$5/10$ of 6 = → S	$6/10$ of 25 = → I	$1/4$ of 128 = → G
$2/4$ of 52 = → A	$4/10$ of 100 = → P	$1/2$ of 46 = → R

Scratch space:

CLUE 4
Order of operations

The villain locked the engine room door with a coded keypad. To unlock it, we must solve the math steps in the correct order. Do the math in parentheses first!

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

B																		
44	14	58	52	12	17	57	27	14	52	57	38	15	58	48	12	33	58	12
72	17	49	38	72	49	49	14	27	12	67	52	17	49	49	54			

$8 \times 6 - 4 = \square \rightarrow \text{B}$

$37 + 7 \times 3 = \square \rightarrow \text{O}$

$7 \times 3 - 4 = \square \rightarrow \text{H}$

$8 \times 11 - 16 = \square \rightarrow \text{T}$

$2 + 6 \times 2 = \square \rightarrow \text{R}$

$11 + 8 \times 7 = \square \rightarrow \text{G}$

$3 \times 11 - 6 = \square \rightarrow \text{I}$

$5 \times 8 - 28 = \square \rightarrow \text{N}$

$7 + 9 \times 5 = \square \rightarrow \text{W}$

$9 \times 8 - 18 = \square \rightarrow \text{L}$

$12 + 6 \times 6 = \square \rightarrow \text{U}$

$13 + 4 \times 9 = \square \rightarrow \text{E}$

$26 + 3 \times 4 = \square \rightarrow \text{S}$

$1 + 8 \times 7 = \square \rightarrow \text{A}$

$17 + 8 \times 2 = \square \rightarrow \text{D}$

$4 \times 7 - 13 = \square \rightarrow \text{F}$

Scratch space:

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

We caught up to a group of sky sailors sharing a bag of gold coins. They had to divide the loot evenly among the crew. The remainder will tell us who is hiding the pirate.

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:

$20 \div 2 = \boxed{}$

$24 \div 8 = \boxed{}$

$40 \div 5 = \boxed{}$

$7 \div 1 = \boxed{}$

$8 \div 4 = \boxed{}$

$42 \div 7 = \boxed{}$

$40 \div 8 = \boxed{}$

$132 \div 12 = \boxed{}$

$12 \div 1 = \boxed{}$

$6 \div 6 = \boxed{}$

$32 \div 8 = \boxed{}$

Step 2 - cross out the sentence with each answer:

1. The villain stole the golden compass, then fled into the thick fog.
2. The villain swiped the ancient map, then fled into the thick fog.
3. The villain swiped the ancient map, then escaped on a mini glider.
4. The villain took the wind crystal, then zipped away with a jetpack.
5. The villain borrowed the main propeller, then escaped on a mini glider.
6. The villain borrowed the main propeller, then zipped away with a jetpack.
7. The villain swiped the ancient map, then zipped away with a jetpack.
8. The villain swiped the ancient map, then hopped onto a cloud sheep.
9. The villain borrowed the main propeller, then slid down the anchor rope.
10. The villain took the wind crystal, then hopped onto a cloud sheep.
11. The villain took the wind crystal, then escaped on a mini glider.
12. The villain grabbed the captain journal, then slid down the anchor rope.

Answer Key

The Cloud Haven Map Caper

Culprit: Toby

fixing steam engines · wind gauge tool · silver goggles · dusty brown hair · fear of heights

Trail: Start 21 → Clue 1 16 → Clue 2 11 → Clue 3 7 → Clue 4 4 → Clue 5 1

Clue 1 (Multiplication facts (1-12)): "THE SUSPECT DOES NOT HAVE A SPARK BLASTER"

$10 \times 8 = 80$ (T) · $2 \times 1 = 2$ (O) · $4 \times 12 = 48$ (K) · $9 \times 10 = 90$ (B) · $1 \times 1 = 1$ (L) · $5 \times 5 = 25$ (U) · $11 \times 4 = 44$ (P) · $6 \times 11 = 66$ (D) · $2 \times 5 = 10$ (H) · $9 \times 7 = 63$ (C) · $12 \times 12 = 144$ (R) · $9 \times 6 = 54$ (N) · $11 \times 5 = 55$ (E) · $8 \times 4 = 32$ (A) · $12 \times 10 = 120$ (V) · $7 \times 12 = 84$ (S)

Clue 2 (Word problems): "SILVER GOGGLES"

There were 106 sky-maps. 17 were used up. How many sky-maps are left? = 89 (S) · There were 27 grappling ropes. 4 were used up. How many grappling ropes are left? = 23 (L) · Captain Copter found 68 brass gears yesterday and 28 more today. How many brass gears in all? = 96 (R) · Captain Copter found 18 brass gears yesterday and 88 more today. How many brass gears in all? = 106 (E) · Captain Copter found 35 brass gears yesterday and 6 more today. How many brass gears in all? = 41 (I) · Captain Copter lined up 9 rows of 5 spyglass lenses. How many spyglass lenses in all? = 45 (V) · There were 30 sky-maps. 23 were used up. How many sky-maps are left? = 7 (G)

Clue 3 (Fractions of a number): "THE TARGET FEARS HIGH PLACES"

$2/8$ of 80 = 20 (T) · $2/8$ of 76 = 19 (F) · $2/4$ of 62 = 31 (H) · $1/4$ of 120 = 30 (L) · $6/8$ of 36 = 27 (E) · $1/5$ of 40 = 8 (C) · $5/10$ of 6 = 3 (S) · $6/10$ of 25 = 15 (I) · $1/4$ of 128 = 32 (G) · $2/4$ of 52 = 26 (A) · $4/10$ of 100 = 40 (P) · $1/2$ of 46 = 23 (R)

Clue 4 (Order of operations): "BROWN HAIR WAS FOUND ON THE STEERING WHEEL"

$8 \times 6 - 4 = 44$ (B) · $37 + 7 \times 3 = 58$ (O) · $7 \times 3 - 4 = 17$ (H) · $8 \times 11 - 16 = 72$ (T) · $2 + 6 \times 2 = 14$ (R) · $11 + 8 \times 7 = 67$ (G) · $3 \times 11 - 6 = 27$ (I) · $5 \times 8 - 28 = 12$ (N) · $7 + 9 \times 5 = 52$ (W) · $9 \times 8 - 18 = 54$ (L) · $12 + 6 \times 6 = 48$ (U) · $13 + 4 \times 9 = 49$ (E) · $26 + 3 \times 4 = 38$ (S) · $1 + 8 \times 7 = 57$ (A) · $17 + 8 \times 2 = 33$ (D) · $4 \times 7 - 13 = 15$ (F)

Clue 5 (Division facts (1-12)): surviving statement is box 9 → Toby

$20 \div 2 = 10$ · $24 \div 8 = 3$ · $40 \div 5 = 8$ · $7 \div 1 = 7$ · $8 \div 4 = 2$ · $42 \div 7 = 6$ · $40 \div 8 = 5$ · $132 \div 12 = 11$ · $12 \div 1 = 12$ · $6 \div 6 = 1$ · $32 \div 8 = 4$