



The Great Sky Island Heist

Grade 4 math · Fractions of a number, Rounding, Addition, Subtraction · Reading level grades 3-4

Detective: _____ **Date:** _____

The Golden Propeller has been stolen from the Windhaven Air Dock! Without it, the annual Sky Derby cannot begin. Captain Barnaby and the Sky Patrol need your help to track down the sneaky Cloud Crook before they escape into the storm 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 Cloud Crook is _____

Possible suspects

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

NAME	AIRSHIP TOOL	SECRET GADGET	STEERING GRIP	HAIR COLOR	FAVORITE SNACK
Owen	mega magnet	fog generator	left-handed grip	cloud white	cherry tarts
Zoe	grappling claw	sound muffler	right-handed grip	cloud white	lemon drops
Jasper	mega magnet	sound muffler	right-handed grip	sunset orange	cherry tarts
Mia	cloud glider	sound muffler	right-handed grip	sunset orange	cherry tarts
Kai	wind propeller	bubble shield	left-handed grip	sunset orange	cherry tarts
Amy	mega magnet	laser pointer	right-handed grip	sunset orange	maple waffles
Toby	steam booster	net launcher	right-handed grip	sunset orange	cherry tarts
Ruby	steam booster	sound muffler	right-handed grip	cloud white	maple waffles
Sienna	mega magnet	laser pointer	left-handed grip	sunset orange	maple waffles
Cora	mega magnet	fog generator	left-handed grip	sunset orange	maple waffles
Sam	mega magnet	laser pointer	left-handed grip	cloud white	lemon drops
Roy	cloud glider	net launcher	left-handed grip	stormy gray	cherry tarts
Milo	steam booster	fog generator	right-handed grip	sunset orange	maple waffles
Eli	steam booster	fog generator	right-handed grip	cloud white	maple waffles
Finn	steam booster	fog generator	left-handed grip	sunset orange	lemon drops
Otis	wind propeller	fog generator	right-handed grip	cloud white	cherry tarts
Ben	cloud glider	fog generator	right-handed grip	sunset orange	cherry tarts
Luna	steam booster	bubble shield	right-handed grip	stormy gray	cherry tarts
Leo	wind propeller	laser pointer	right-handed grip	cloud white	cherry tarts
Eva	steam booster	sound muffler	right-handed grip	sunset orange	cherry tarts
Jax	wind propeller	laser pointer	left-handed grip	cloud white	cherry tarts

CLUE 1
Fractions of a number

Captain Barnaby counted all sixty spark plugs on the shelf. The thief took a fraction of them to stall the airship.

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

T																		
39	11	23	2	29	35	35	3	26	35	23	24	40	35	39	12	24	23	4

40	23	39	19	4	12	40	2	11	23	29

$1/2 \text{ of } 78 = \square \rightarrow \text{T}$

$1/6 \text{ of } 66 = \square \rightarrow \text{H}$

$2/6 \text{ of } 36 = \square \rightarrow \text{U}$

$3/6 \text{ of } 38 = \square \rightarrow \text{L}$

$1/2 \text{ of } 8 = \square \rightarrow \text{A}$

$1/6 \text{ of } 174 = \square \rightarrow \text{R}$

$2/3 \text{ of } 3 = \square \rightarrow \text{C}$

$5/10 \text{ of } 52 = \square \rightarrow \text{D}$

$1/4 \text{ of } 96 = \square \rightarrow \text{S}$

$7/8 \text{ of } 40 = \square \rightarrow \text{O}$

$3/6 \text{ of } 46 = \square \rightarrow \text{E}$

$2/3 \text{ of } 60 = \square \rightarrow \text{N}$

$2/6 \text{ of } 9 = \square \rightarrow \text{K}$

Scratch space:

CLUE 2 Rounding

Our altitude dial was broken. It only showed the height rounded to the nearest ten.

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

T									T										
90	70	4300	230	20	230	700	1700	3000	90	170	70	4300	4300	1100	170	2900	2000		
						T		T							T				
70	4300	1100	130	170	3000	90	70	90	70	4300	900	3000	200	70	90				
70	2900	1300	130																

Round 89 to the nearest ten →

T

Round 152 to the nearest hundred →

G

Round 2,249 to the nearest thousand →

S

Round 227 to the nearest ten →

C

Round 1,057 to the nearest hundred →

L

Round 70 to the nearest ten →

H

Round 2,932 to the nearest hundred →

A

Round 1,708 to the nearest hundred →

P

Round 174 to the nearest ten →

W

Round 4,261 to the nearest hundred →

E

Round 887 to the nearest hundred →

R

Round 22 to the nearest ten →

O

Round 132 to the nearest ten →

D

Round 1,258 to the nearest hundred →

N

Round 3,157 to the nearest thousand →

I

Round 700 to the nearest hundred →

K

Scratch space:

Addition

We found the engine room keys by adding up the spare gears in the toolbox.

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

Diagram illustrating a sequence of numbers arranged in two rows. The top row contains 18 boxes, and the bottom row contains 15 boxes. The numbers in the top row are: 3779, 4478, 8959, 5623, 4510, 8959, 3459, 9801, 3302, 7777, 2082, 3831, 3831, 9801, 7777, 3459, 4510, 4510, 3831, 3779. The numbers in the bottom row are: 2082, 8959, 5623, 6825, 5623, 3779, 7777, 4478, 8959, 2082, 2082, 3302, 3779, 3459, 2082, 3779, 5623. The first and last boxes in each row are highlighted in orange and contain the letter 'T'.

$$2148 + 1631 = \boxed{} \rightarrow \boxed{\text{T}}$$

$$3231 + 4546 = \boxed{} \rightarrow \boxed{\text{C}}$$

$$1689 + 2142 = \boxed{} \rightarrow \boxed{0}$$

$$1110 + 972 = \boxed{} \rightarrow \boxed{\text{R}}$$

$$3110 + 2513 = \boxed{} \rightarrow \boxed{\text{S}}$$

$$5556 + 3403 = \boxed{} \rightarrow \boxed{\text{E}}$$

$$1559 + 1743 = \boxed{} \rightarrow \boxed{\mathbf{Y}}$$

$$2118 + 2360 = \boxed{} \rightarrow \boxed{\text{H}}$$

$$5619 + 4182 = \boxed{} \rightarrow \boxed{\text{K}}$$

$$2237 + 2273 = \boxed{} \rightarrow \boxed{\text{N}}$$

$$1941 + 1518 = \boxed{} \rightarrow \boxed{\text{A}}$$

$$3916 + 2909 = \boxed{} \rightarrow \boxed{}$$

Scratch space:

CLUE 4
Subtraction

The thief threw heavy sandbags overboard. We subtracted the lost weight to find our new speed.

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

W															
7833	5935	3021	4311	7599	4365	7876	4973	2634	4403	6822	4365	7876	4973	4311	3021

4973	7599	4365	4973	5935	2634	4311	4403	6822	4365	2364	5935	4889	6822	7791	4403

$8388 - 555 = \square \rightarrow \boxed{\text{W}}$

$5043 - 732 = \square \rightarrow \boxed{\text{O}}$

$3724 - 1090 = \square \rightarrow \boxed{\text{T}}$

$7199 - 2834 = \square \rightarrow \boxed{\text{N}}$

$9817 - 4928 = \square \rightarrow \boxed{\text{H}}$

$9988 - 3166 = \square \rightarrow \boxed{\text{A}}$

$3083 - 62 = \square \rightarrow \boxed{\text{F}}$

$7652 - 53 = \square \rightarrow \boxed{\text{U}}$

$2689 - 325 = \square \rightarrow \boxed{\text{G}}$

$8163 - 3760 = \square \rightarrow \boxed{\text{R}}$

$7045 - 2072 = \square \rightarrow \boxed{\text{S}}$

$7907 - 1972 = \square \rightarrow \boxed{\text{E}}$

$10324 - 2533 = \square \rightarrow \boxed{\text{I}}$

$10199 - 2323 = \square \rightarrow \boxed{\text{D}}$

Scratch space:

CLUE 5**Fractions of a number - the last clue**

The Sky Patrol found a torn map. We calculated a fraction of the missing miles to locate the hideout.

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:

$1/4 \text{ of } 12 = \boxed{}$

$1/5 \text{ of } 55 = \boxed{}$

$2/10 \text{ of } 50 = \boxed{}$

$2/6 \text{ of } 6 = \boxed{}$

$4/8 \text{ of } 10 = \boxed{}$

$2/8 \text{ of } 28 = \boxed{}$

$3/6 \text{ of } 16 = \boxed{}$

$1/5 \text{ of } 20 = \boxed{}$

$3/5 \text{ of } 15 = \boxed{}$

$1/5 \text{ of } 5 = \boxed{}$

$3/5 \text{ of } 20 = \boxed{}$

Step 2 - cross out the sentence with each answer:

1. The villain snatches the sky map, then escapes through the sky hatch.
2. The villain snatches the sky map, then flies into the sunset.
3. The villain steals the silver trophy, then slides down the anchor rope.
4. The villain grabs the diamond compass, then escapes through the sky hatch.
5. The villain steals the silver trophy, then flies into the sunset.
6. The villain takes the secret diary, then slides down the anchor rope.
7. The villain grabs the diamond compass, then slides down the anchor rope.
8. The villain grabs the diamond compass, then zooms off into the clouds.
9. The villain swipes the golden propeller, then slides down the anchor rope.
10. The villain snatches the sky map, then slides down the anchor rope.
11. The villain steals the silver trophy, then escapes through the sky hatch.
12. The villain snatches the sky map, then zooms off into the clouds.

Answer Key

The Great Sky Island Heist

Culprit: Jasper

mega magnet · sound muffler · right-handed grip · sunset orange · cherry tarts

Trail: Start 21 → Clue 1 19 → Clue 2 12 → Clue 3 7 → Clue 4 4 → Clue 5 1

Clue 1 (Fractions of a number): "THE CROOK DOES NOT USE A NET LAUNCHER"

$\frac{1}{2}$ of 78 = 39 (T) · $\frac{1}{6}$ of 66 = 11 (H) · $\frac{2}{6}$ of 36 = 12 (U) · $\frac{3}{6}$ of 38 = 19 (L) · $\frac{1}{2}$ of 8 = 4 (A) · $\frac{1}{6}$ of 174 = 29 (R) · $\frac{2}{3}$ of 3 = 2 (C) · $\frac{5}{10}$ of 52 = 26 (D) · $\frac{1}{4}$ of 96 = 24 (S) · $\frac{7}{8}$ of 40 = 35 (O) · $\frac{3}{6}$ of 46 = 23 (E) · $\frac{2}{3}$ of 60 = 40 (N) · $\frac{2}{6}$ of 9 = 3 (K)

Clue 2 (Rounding): "THE COCKPIT WHEEL WAS HELD WITH THE RIGHT HAND"

Round 89 to the nearest ten = 90 (T) · Round 152 to the nearest hundred = 200 (G) · Round 2,249 to the nearest thousand = 2000 (S) · Round 227 to the nearest ten = 230 (C) · Round 1,057 to the nearest hundred = 1100 (L) · Round 70 to the nearest ten = 70 (H) · Round 2,932 to the nearest hundred = 2900 (A) · Round 1,708 to the nearest hundred = 1700 (P) · Round 174 to the nearest ten = 170 (W) · Round 4,261 to the nearest hundred = 4300 (E) · Round 887 to the nearest hundred = 900 (R) · Round 22 to the nearest ten = 20 (O) · Round 132 to the nearest ten = 130 (D) · Round 1,258 to the nearest hundred = 1300 (N) · Round 3,157 to the nearest thousand = 3000 (I) · Round 700 to the nearest hundred = 700 (K)

Clue 3 (Addition): "THE SNEAKY CROOK CANNOT RESIST CHERRY TARTS"

$2148 + 1631 = 3779$ (T) · $3231 + 4546 = 7777$ (C) · $1689 + 2142 = 3831$ (O) · $1110 + 972 = 2082$ (R) · $3110 + 2513 = 5623$ (S) · $5556 + 3403 = 8959$ (E) · $1559 + 1743 = 3302$ (Y) · $2118 + 2360 = 4478$ (H) · $5619 + 4182 = 9801$ (K) · $2237 + 2273 = 4510$ (N) · $1941 + 1518 = 3459$ (A) · $3916 + 2909 = 6825$ (I)

Clue 4 (Subtraction): "WE FOUND STRANDS OF SUNSET ORANGE HAIR"

$8388 - 555 = 7833$ (W) · $5043 - 732 = 4311$ (O) · $3724 - 1090 = 2634$ (T) · $7199 - 2834 = 4365$ (N) · $9817 - 4928 = 4889$ (H) · $9988 - 3166 = 6822$ (A) · $3083 - 62 = 3021$ (F) · $7652 - 53 = 7599$ (U) · $2689 - 325 = 2364$ (G) · $8163 - 3760 = 4403$ (R) · $7045 - 2072 = 4973$ (S) · $7907 - 1972 = 5935$ (E) · $10324 - 2533 = 7791$ (I) · $10199 - 2323 = 7876$ (D)

Clue 5 (Fractions of a number): surviving statement is box 6 → Jasper

$\frac{1}{4}$ of 12 = 3 · $\frac{1}{5}$ of 55 = 11 · $\frac{2}{10}$ of 50 = 10 · $\frac{2}{6}$ of 6 = 2 · $\frac{4}{8}$ of 10 = 5 · $\frac{2}{8}$ of 28 = 7 · $\frac{3}{6}$ of 16 = 8 · $\frac{1}{5}$ of 20 = 4 · $\frac{3}{5}$ of 15 = 9 · $\frac{1}{5}$ of 5 = 1 · $\frac{3}{5}$ of 20 = 12