The Sky Island Caper

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

Detective: _____ **Date:** _____

The golden compass has been swiped from the Headmaster's desk high above the clouds! We need to follow the clues, use our math gear, and track down the culprit before they fly away forever.

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

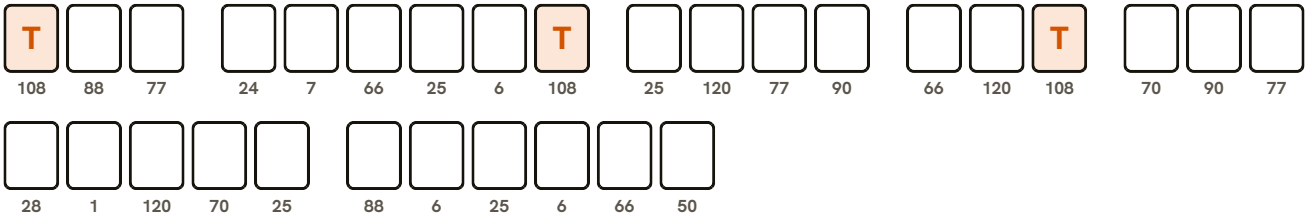
Cross off a row as each clue rules it out. The one left at the end is the culprit.

NAME	SPECIAL GEAR	SECONDARY SKILL	DOMINANT HAND	HAIR STYLE	FOIL
Finn Falcon	glider wings	rope swinging	left handed	braided green hair	sticky bubblegum
Leo Launch	grappling hook	lock picking	left handed	braided green hair	sticky bubblegum
Zane Zeppelin	rocket boots	lock picking	right handed	curly blue hair	loud whistles
Maya Mapmaker	climbing claws	map decoding	right handed	braided green hair	sticky bubblegum
Rusty Rotor	glider wings	rope swinging	right handed	spiky red hair	sticky bubblegum
Val Velocity	rocket boots	stealthy crawling	left handed	braided green hair	sticky bubblegum
Barnaby Blast	rocket boots	cloud hiding	left handed	curly blue hair	loud whistles
Captain Cody	climbing claws	rope swinging	left handed	braided green hair	sticky bubblegum
Dash Daring	grappling hook	stealthy crawling	right handed	braided green hair	sticky bubblegum
Clara Compass	glider wings	stealthy crawling	right handed	spiky red hair	loud whistles
Jet Jackson	glider wings	rope swinging	left handed	spiky red hair	sticky bubblegum
Stormy Sam	climbing claws	cloud hiding	left handed	spiky red hair	loud whistles
Skye Spinner	smoke bombs	map decoding	right handed	spiky red hair	sticky bubblegum
Gale Gordon	grappling hook	stealthy crawling	left handed	spiky red hair	loud whistles
Ace Altitude	grappling hook	cloud hiding	left handed	braided green hair	sticky bubblegum
Piper Prop	smoke bombs	stealthy crawling	left handed	spiky red hair	bright flashlights
Rex Radar	grappling hook	lock picking	left handed	braided green hair	bright flashlights
Sunny Sarah	smoke bombs	rope swinging	right handed	curly blue hair	sticky bubblegum
Gemma Glider	smoke bombs	rope swinging	left handed	braided green hair	bright flashlights
Aero Andy	smoke bombs	lock picking	left handed	spiky red hair	sticky bubblegum
Breezy Bella	glider wings	map decoding	right handed	braided green hair	loud whistles

CLUE 1 Multiplication facts (1-12)

To unlock the secure hangar, we need to count the rows of sky bikes parked in the grid.

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



12 × 9 = ☐ → T

7 × 11 = ☐ → E

12 × 10 = ☐ → O

2 × 12 = ☐ → B

11 × 6 = ☐ → N

10 × 5 = ☐ → G

1 × 1 = ☐ → L

4 × 7 = ☐ → C

7 × 1 = ☐ → A

9 × 10 = ☐ → S

5 × 5 = ☐ → D

8 × 11 = ☐ → H

2 × 3 = ☐ → I

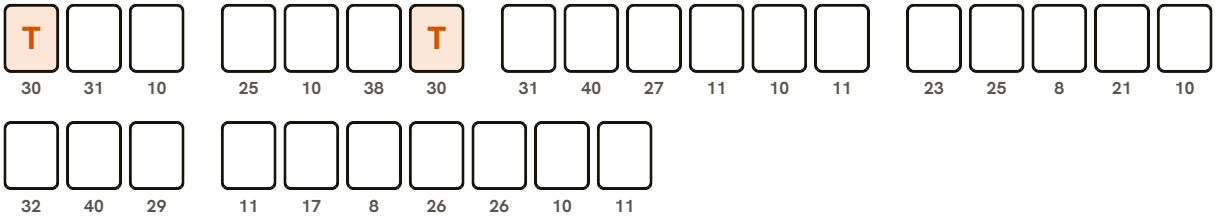
10 × 7 = ☐ → U

Scratch space:

CLUE 2 Fractions of a number

A fraction of the compass fuel cells have been drained, and we must find the exact amount.

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



3/10 of 100 = ☐ → T

2/10 of 190 = ☐ → F

4/10 of 25 = ☐ → E

1/8 of 88 = ☐ → D

7/8 of 24 = ☐ → V

1/4 of 108 = ☐ → N

2/4 of 34 = ☐ → R

4/10 of 80 = ☐ → W

4/5 of 50 = ☐ → A

1/5 of 130 = ☐ → P

2/6 of 93 = ☐ → H

3/6 of 58 = ☐ → S

3/6 of 50 = ☐ → L

1/8 of 184 = ☐ → G

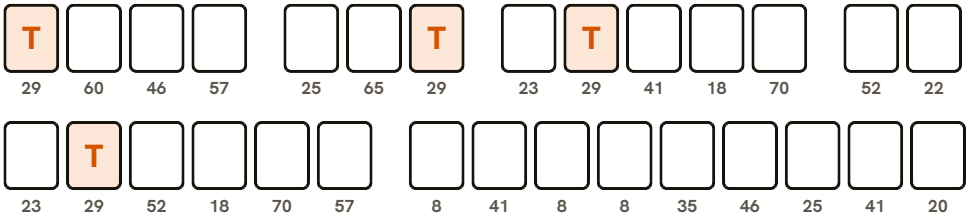
1/8 of 64 = ☐ → O

Scratch space:

CLUE 3 Order of operations

> We found a scrap of paper with a multi-step formula used to program the airship's auto-pilot.

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



12 × 3 - 7 = ☐ → T	11 × 5 - 14 = ☐ → U	10 × 4 - 5 = ☐ → L
8 × 4 - 24 = ☐ → B	9 × 4 - 13 = ☐ → S	6 + 8 × 5 = ☐ → E
5 × 7 - 15 = ☐ → M	33 + 4 × 6 = ☐ → Y	11 × 8 - 18 = ☐ → K
6 × 12 - 20 = ☐ → I	8 + 2 × 5 = ☐ → C	2 + 5 × 4 = ☐ → N
44 + 2 × 8 = ☐ → H	17 + 4 × 2 = ☐ → G	47 + 6 × 3 = ☐ → O

Scratch space:

CLUE 4 Rounding

The sky radar only shows the bandit's distance rounded to the nearest ten miles.

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

W																								
20	3700	430	290	50	2000	2900	230	1100	900	70	2900	3700	2900	1300	1100	3700	3700	2000						
30	900	70	1100	290	2000	200	30	3700	2900	3700	7000	170												

Round 21 to the nearest ten ☐ → W

Round 935 to the nearest hundred ☐ → A

Round 170 to the nearest ten ☐ → K

Round 157 to the nearest hundred ☐ → T

Round 1,276 to the nearest hundred ☐ → G

Round 66 to the nearest ten ☐ → I

Round 6,955 to the nearest thousand ☐ → S

Round 1,081 to the nearest hundred ☐ → R

Round 54 to the nearest ten ☐ → U

Round 2,934 to the nearest hundred ☐ → D

Round 3,718 to the nearest hundred ☐ → E

Round 1,844 to the nearest thousand ☐ → N

Round 427 to the nearest ten ☐ → F

Round 34 to the nearest ten ☐ → H

Round 294 to the nearest ten ☐ → O

Round 229 to the nearest ten ☐ → B

Scratch space:

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

> To split the rescue crew into equal search teams, we have to divide the remaining academy maps.

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:

144 ÷ 12 = ☐ | 30 ÷ 3 = ☐ | 45 ÷ 5 = ☐ | 24 ÷ 4 = ☐ | 45 ÷ 9 = ☐

132 ÷ 12 = ☐ | 9 ÷ 3 = ☐ | 24 ÷ 3 = ☐ | 2 ÷ 1 = ☐ | 20 ÷ 5 = ☐

2 ÷ 2 = ☐

Step 2 - cross out the sentence with each answer:

1. The villain zipped away with a grappling hook, then swung to safety with rope swinging.
2. The villain zoomed off using rocket boots, then fled after map decoding.
3. The villain zoomed off using rocket boots, then escaped into the sky via cloud hiding.
4. The villain soared off on glider wings, then fled after map decoding.
5. The villain soared off on glider wings, then crept away using stealthy crawling.
6. The villain vanished inside a cloud of smoke bombs, then fled after map decoding.
7. The villain zipped away with a grappling hook, then escaped by quickly lock picking.
8. The villain soared off on glider wings, then escaped by quickly lock picking.
9. The villain soared off on glider wings, then swung to safety with rope swinging.
10. The villain scaled the wall with climbing claws, then swung to safety with rope swinging.
11. The villain scaled the wall with climbing claws, then escaped by quickly lock picking.
12. The villain zoomed off using rocket boots, then crept away using stealthy crawling.

TEACHER / PARENT

Answer Key

The Sky Island Caper

Culprit: Leo Launch

grappling hook · lock picking · left handed · braided green hair · sticky bubblegum

Trail: Start 21 → Clue 1 18 → Clue 2 10 → Clue 3 6 → Clue 4 4 → Clue 5 1

Clue 1 (Multiplication facts (1-12)): "THE BANDIT DOES NOT USE CLOUD HIDING"

12 × 9 = 108 (T) · 7 × 11 = 77 (E) · 12 × 10 = 120 (O) · 2 × 12 = 24 (B) · 11 × 6 = 66 (N) · 10 × 5 = 50 (G) · 1 × 1 = 1 (L) · 4 × 7 = 28 (C) · 7 × 1 = 7 (A) · 9 × 10 = 90 (S) · 5 × 5 = 25 (D) · 8 × 11 = 88 (H) · 2 × 3 = 6 (I) · 10 × 7 = 70 (U)

Clue 2 (Fractions of a number): "THE LEFT HANDED GLOVE WAS DROPPED"

3/10 of 100 = 30 (T) · 2/10 of 190 = 38 (F) · 4/10 of 25 = 10 (E) · 1/8 of 88 = 11 (D) · 7/8 of 24 = 21 (V) · 1/4 of 108 = 27 (N) · 2/4 of 34 = 17 (R) · 4/10 of 80 = 32 (W) · 4/5 of 50 = 40 (A) · 1/5 of 130 = 26 (P) · 2/6 of 93 = 31 (H) · 3/6 of 58 = 29 (S) · 3/6 of 50 = 25 (L) · 1/8 of 184 = 23 (G) · 1/8 of 64 = 8 (O)

Clue 3 (Order of operations): "THEY GOT STUCK IN STICKY BUBBLEGUM"

12 × 3 - 7 = 29 (T) · 11 × 5 - 14 = 41 (U) · 10 × 4 - 5 = 35 (L) · 8 × 4 - 24 = 8 (B) · 9 × 4 - 13 = 23 (S) · 6 + 8 × 5 = 46 (E) · 5 × 7 - 15 = 20 (M) · 33 + 4 × 6 = 57 (Y) · 11 × 8 - 18 = 70 (K) · 6 × 12 - 20 = 52 (I) · 8 + 2 × 5 = 18 (C) · 2 + 5 × 4 = 22 (N) · 44 + 2 × 8 = 60 (H) · 17 + 4 × 2 = 25 (G) · 47 + 6 × 3 = 65 (O)

Clue 4 (Rounding): "WE FOUND BRAIDED GREEN HAIR ON THE DESK"

Round 21 to the nearest ten = 20 (W) · Round 935 to the nearest hundred = 900 (A) · Round 170 to the nearest ten = 170 (K) · Round 157 to the nearest hundred = 200 (T) · Round 1,276 to the nearest hundred = 1300 (G) · Round 66 to the nearest ten = 70 (I) · Round 6,955 to the nearest thousand = 7000 (S) · Round 1,081 to the nearest hundred = 1100 (R) · Round 54 to the nearest ten = 50 (U) · Round 2,934 to the nearest hundred = 2900 (D) · Round 3,718 to the nearest hundred = 3700 (E) · Round 1,844 to the nearest thousand = 2000 (N) · Round 427 to the nearest ten = 430 (F) · Round 34 to the nearest ten = 30 (H) · Round 294 to the nearest ten = 290 (O) · Round 229 to the nearest ten = 230 (B)

Clue 5 (Division facts (1-12)): surviving statement is box 7 → Leo Launch

144 ÷ 12 = 12 · 30 ÷ 3 = 10 · 45 ÷ 5 = 9 · 24 ÷ 4 = 6 · 45 ÷ 9 = 5 · 132 ÷ 12 = 11 · 9 ÷ 3 = 3 · 24 ÷ 3 = 8 · 2 ÷ 1 = 2 · 20 ÷ 5 = 4 · 2 ÷ 2 = 1