



The Sky Island Mystery

Grade 6 math · Place value, Rounding, Skip counting, Bar models, Division · Reading level grades 3-4

Detective: _____ **Date:** _____

The Golden Compass has been swiped from the high wind docks! The Chief Cloud Keeper needs your help to track down the sneaky Sky Bandit before they sail away in a stolen airship.

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	ESCAPE GEAR	SKY GADGET	OBSERVED GLOVE	CAP FEATHER	BANDIT WEAKNESS
Kip	net launcher	spyglass	uses a right hand glove	blue feather	soapy bubbles
Ginger	rope dart	wind gauge	uses a left hand glove	green feather	shiny coins
Ellie	net launcher	brass whistle	uses a left hand glove	blue feather	soapy bubbles
Toby	wind hook	compass watch	uses a right hand glove	red feather	shiny coins
Hudson	bubble blaster	compass watch	uses a right hand glove	red feather	soapy bubbles
Rusty	net launcher	brass whistle	uses a right hand glove	red feather	soapy bubbles
Nell	wind hook	sky map	uses a right hand glove	green feather	sticky sap
Uma	rope dart	sky map	uses a right hand glove	blue feather	shiny coins
Lola	bubble blaster	wind gauge	uses a right hand glove	green feather	soapy bubbles
Barnaby	net launcher	spyglass	uses a left hand glove	green feather	sticky sap
Dash	wind hook	compass watch	uses a left hand glove	blue feather	shiny coins
Pip	glider pack	compass watch	uses a right hand glove	green feather	soapy bubbles
Wendy	bubble blaster	wind gauge	uses a right hand glove	red feather	soapy bubbles
Flint	glider pack	compass watch	uses a left hand glove	green feather	shiny coins
Xavier	rope dart	compass watch	uses a right hand glove	red feather	soapy bubbles
Victor	net launcher	sky map	uses a left hand glove	red feather	soapy bubbles
Otis	wind hook	compass watch	uses a left hand glove	red feather	soapy bubbles
Yana	bubble blaster	wind gauge	uses a right hand glove	red feather	sticky sap
Izzy	net launcher	compass watch	uses a right hand glove	red feather	shiny coins
Skye	bubble blaster	spyglass	uses a right hand glove	red feather	soapy bubbles
Monty	wind hook	brass whistle	uses a right hand glove	blue feather	shiny coins

CLUE 1 Place value

A locked chest blocks the path. You must look at the digit values on the lock to crack the code and find a clue.

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

T									T								T
2000	60	20	10	6000	50	700	70	2000	700	100	20	900	50	100	2000		

8000	6000	4000	4000	1000	6000	900	200	1000	80	5000	6000	900	900				

What is the value of the 2 in 592,003? → **T**

What is the value of the 8 in 94,687? → **G**

What is the value of the 8 in 578,114? → **C**

What is the value of the 1 in 59,120? → **O**

What is the value of the 5 in 483,451? → **N**

What is the value of the 2 in 15,289? → **P**

What is the value of the 9 in 31,984? → **S**

What is the value of the 1 in 551,578? → **Y**

What is the value of the 6 in 37,861? → **H**

What is the value of the 4 in 54,000? → **R**

What is the value of the 5 in 435,462? → **L**

What is the value of the 7 in 19,678? → **I**

What is the value of the 6 in 46,152? → **A**

What is the value of the 2 in 631,328? → **E**

What is the value of the 1 in 47,215? → **B**

What is the value of the 7 in 56,730? → **D**

Scratch space:

Rounding

Your wind radar only shows rounded numbers. Round the distance to the nearest ten to find the bandit's trail.

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

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

Round 1,292 to the nearest hundred → **G**

Round 230 to the nearest ten $\rightarrow$ **D**

Round 7,442 to the nearest thousand → **K**

Round 2,319 to the nearest hundred $\rightarrow$

Round 714 to the nearest hundred $\rightarrow$ **B**

Round 172 to the nearest ten $\rightarrow$ **S**

Round 906 to the nearest hundred $\rightarrow$ **V**

Round 94 to the nearest ten $\rightarrow$ **R**

Round 73 to the nearest ten $\rightarrow$

Round 322 to the nearest hundred $\rightarrow$ **Y**

Round 5,433 to the nearest thousand → **N**

Round 488 to the nearest hundred → **A**

Round 2,153 to the nearest thousand → **E**

Round 4,310 to the nearest hundred $\rightarrow$ **W**

Round 289 to the nearest ten $\rightarrow$ **H**

Round 3,749 to the nearest hundred → **L**

Scratch space:

CLUE 3

Skip counting

To cross the floating stepping stones, you must count by fives to find the safe path and grab a dropped clue.

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

S												S							
100	39	10	42	16	18	130	42	39	120	9	55	100	50	42	55	10			
S								S									S		
100	35	9	33	33	10	45	18	100	22	42	33	18	130	27	130	130	35	10	100

Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, 60, 70, 80, 90, __, 110, 120 → **S**

Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, 21, 24, 27, 30, 33, 36, __, 42, 45 → **N**

Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, 21, 24, 27, 30, 33, 36, 39, __, 45, 48 → **A**

Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, 60, 70, 80, 90, 100, 110, 120, __, 140, 150 → **B**

Skip-count by 5s. Fill the blank: 5, 10, 15, 20, 25, 30, 35, 40, __, 50, 55 → **R**

Skip-count by 3s. Fill the blank: 3, 6, __, 12, 15 → **I**

Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, 60, 70, 80, 90, 100, 110, __, 130, 140 → **D**

Skip-count by 2s. Fill the blank: 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, __, 24, 26 → **O**

Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, 21, 24, __, 30, 33 → **U**

Skip-count by 5s. Fill the blank: 5, 10, 15, 20, 25, 30, 35, 40, 45, 50, __, 60, 65 → **T**

Skip-count by 5s. Fill the blank: 5, 10, 15, 20, 25, 30, __, 40, 45 → **L**

Skip-count by 5s. Fill the blank: 5, 10, 15, 20, 25, 30, 35, 40, 45, __, 55, 60 → **H**

Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, 21, 24, 27, 30, __, 36, 39 → **P**

Skip-count by 2s. Fill the blank: 2, 4, 6, 8, 10, 12, 14, __, 18, 20 → **K**

Skip-count by 2s. Fill the blank: 2, 4, 6, 8, __, 12, 14 → **E**

Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, __, 21, 24 → **Y**

Scratch space:

CLUE 4

Bar model word problems

The bandit loaded bags onto a scale. Compare the block diagrams of the bag weights to see which path they took.

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

A strand of

R									R
---	--	--	--	--	--	--	--	--	---

 hair turned up at the scene.

136 62 140 80 62 87 108 21 62 136

Scout used $\frac{1}{2}$ of the rope hook on the first day. The other 68 rope hook were used the next day. How many rope hook were there in all?

draw a bar model

Answer:

--

 →

R

Scout shares 168 sky map equally among 8 teams. How many sky map does each team get?

draw a bar model

Answer:

--

 →

H

There were 177 sky map in all. 37 sky map were used. How many sky map are left?

draw a bar model

Answer:

--

 →

D

One group collected 8 wind gem and another group collected 79 wind gem. How many wind gem in all?

draw a bar model

Answer:

--

 →

A

There were 114 shiny coin in all. 6 shiny coin were used. How many shiny coin are left?

draw a bar model

Answer:

--

 →

T

Scout used $\frac{1}{2}$ of the rope hook on the first day. The other 31 rope hook were used the next day. How many rope hook were there in all?

draw a bar model

Answer:

--

 →

E

There were 117 sky map in all. 37 sky map were used. How many sky map are left?

draw a bar model

Answer:

--

 →

F

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

You find a bag of stolen berries. Share them equally among the team to power up and catch the bandit.

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:

$1 \div 1 = \boxed{}$

$108 \div 12 = \boxed{}$

$6 \div 3 = \boxed{}$

$32 \div 8 = \boxed{}$

$36 \div 6 = \boxed{}$

$14 \div 2 = \boxed{}$

$8 \div 1 = \boxed{}$

$132 \div 11 = \boxed{}$

$3 \div 1 = \boxed{}$

$110 \div 11 = \boxed{}$

$60 \div 12 = \boxed{}$

Step 2 - cross out the sentence with each answer:

1. The villain zips up the cliff with a rope dart, then checks a ticking compass watch.
2. The villain shoots giant suds with a bubble blaster, then checks a ticking compass watch.
3. The villain snags the loot with a net launcher, then consults a dusty sky map.
4. The villain zooms away on a glider pack, then blows a loud brass whistle.
5. The villain zooms away on a glider pack, then peers through a heavy spyglass.
6. The villain shoots giant suds with a bubble blaster, then consults a dusty sky map.
7. The villain snags the loot with a net launcher, then peers through a heavy spyglass.
8. The villain zooms away on a glider pack, then holds up a spinning wind gauge.
9. The villain snags the loot with a net launcher, then blows a loud brass whistle.
10. The villain zooms away on a glider pack, then consults a dusty sky map.
11. The villain shoots giant suds with a bubble blaster, then holds up a spinning wind gauge.
12. The villain swings across trees with a wind hook, then blows a loud brass whistle.

Answer Key

The Sky Island Mystery

Culprit: Wendy

bubble blaster · wind gauge · uses a right hand glove · red feather · soapy bubbles

Trail: Start 21 → Clue 1 18 → Clue 2 12 → Clue 3 6 → Clue 4 4 → Clue 5 1

Clue 1 (Place value): "THE BANDIT DOES NOT CARRY A SPYGLASS"

What is the value of the 2 in 592,003? = 2000 (T) · What is the value of the 8 in 94,687? = 80 (G) · What is the value of the 8 in 578,114? = 8000 (C) · What is the value of the 1 in 59,120? = 100 (O) · What is the value of the 5 in 483,451? = 50 (N) · What is the value of the 2 in 15,289? = 200 (P) · What is the value of the 9 in 31,984? = 900 (S) · What is the value of the 1 in 551,578? = 1000 (Y) · What is the value of the 6 in 37,861? = 60 (H) · What is the value of the 4 in 54,000? = 4000 (R) · What is the value of the 5 in 435,462? = 5000 (L) · What is the value of the 7 in 19,678? = 70 (I) · What is the value of the 6 in 46,152? = 6000 (A) · What is the value of the 2 in 631,328? = 20 (E) · What is the value of the 1 in 47,215? = 10 (B) · What is the value of the 7 in 56,730? = 700 (D)

Clue 2 (Rounding): "THE SNEAKY BANDIT DRANK WITH THEIR RIGHT GLOVE"

Round 373 to the nearest ten = 370 (T) · Round 1,292 to the nearest hundred = 1300 (G) · Round 230 to the nearest ten = 230 (D) · Round 7,442 to the nearest thousand = 7000 (K) · Round 2,319 to the nearest hundred = 2300 (I) · Round 714 to the nearest hundred = 700 (B) · Round 172 to the nearest ten = 170 (S) · Round 906 to the nearest hundred = 900 (V) · Round 94 to the nearest ten = 90 (R) · Round 73 to the nearest ten = 70 (O) · Round 322 to the nearest hundred = 300 (Y) · Round 5,433 to the nearest thousand = 5000 (N) · Round 488 to the nearest hundred = 500 (A) · Round 2,153 to the nearest thousand = 2000 (E) · Round 4,310 to the nearest hundred = 4300 (W) · Round 289 to the nearest ten = 290 (H) · Round 3,749 to the nearest hundred = 3700 (L)

Clue 3 (Skip counting): "SNEAKY BANDITS HATE SLIPPERY SOAPY BUBBLES"

Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, 60, 70, 80, 90, __, 110, 120 = 100 (S) · Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, 21, 24, 27, 30, 33, 36, __, 42, 45 = 39 (N) · Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, 21, 24, 27, 30, 33, 36, 39, __, 45, 48 = 42 (A) · Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, 60, 70, 80, 90, 100, 110, 120, __, 140, 150 = 130 (B) · Skip-count by 5s. Fill the blank: 5, 10, 15, 20, 25, 30, 35, 40, __, 50, 55 = 45 (R) · Skip-count by 3s. Fill the blank: 3, 6, __, 12, 15 = 9 (I) · Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, 60, 70, 80, 90, 100, 110, __, 130, 140 = 120 (D) · Skip-count by 2s. Fill the blank: 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, __, 24, 26 = 22 (O) · Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, 21, 24, __, 30, 33 = 27 (U) · Skip-count by 5s. Fill the blank: 5, 10, 15, 20, 25, 30, 35, 40, 45, 50, __, 60, 65 = 55 (T) · Skip-count by 5s. Fill the blank: 5, 10, 15, 20, 25, 30, __, 40, 45 = 35 (L) · Skip-count by 5s. Fill the blank: 5, 10, 15, 20, 25, 30, 35, 40, 45, __, 55, 60 = 50 (H) · Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, 21, 24, 27, 30, __, 36, 39 = 33 (P) · Skip-count by 2s. Fill the blank: 2, 4, 6, 8, 10, 12, 14, __, 18, 20 = 16 (K) · Skip-count by 2s. Fill the blank: 2, 4, 6, 8, __, 12, 14 = 10 (E) · Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, __, 21, 24 = 18 (Y)

Clue 4 (Bar model word problems): "RED FEATHER"

Scout used $\frac{1}{2}$ of the rope hook on the first day. The other 68 rope hook were used the next day. How many rope hook were there in all? = 136 (R) · Scout shares 168 sky map equally among 8 teams. How many sky map does each team get? = 21 (H) · There were 177 sky map in all. 37 sky map were used. How many sky map are left? = 140 (D) · One group collected 8 wind gem and another group collected 79 wind gem. How many wind gem in all? = 87 (A) · There were 114 shiny coin in all. 6 shiny coin were used. How many shiny coin are left? = 108 (T) · Scout used $\frac{1}{2}$ of the rope hook on the first day. The other 31 rope hook were used the next day. How many rope hook were there in all? = 62 (E) · There were 117 sky map in all. 37 sky map were used. How many sky map are left? = 80 (F)

Clue 5 (Division facts (1-12)): surviving statement is box 11 → Wendy

$1 \div 1 = 1$ · $108 \div 12 = 9$ · $6 \div 3 = 2$ · $32 \div 8 = 4$ · $36 \div 6 = 6$ · $14 \div 2 = 7$ · $8 \div 1 = 8$ · $132 \div 11 = 12$ · $3 \div 1 = 3$ · $110 \div 11 = 10$ · $60 \div 12 = 5$