



The Case of the Lost Golden Propeller

Grade 3 math · Multiplication, Rounding, Addition, Subtraction, Division · Reading level grades 3-4

Detective: _____ Date: _____

Someone took the famous Golden Propeller right off the trophy wall in the big hangar! The Propeller County Airfield is in a panic, and Chief Mechanic Barnaby needs your help to find the sneaky sky pirate before they fly away into the 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 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	SPECIALTY PLANE	FLIGHT GEAR	STEERING HAND	HAIR COLOR	FLIGHT FEAR
Baron	stunt jet	co-pilot map	right-handed stick	neon yellow dye	distracted by birds
Buzz	turbo prop	co-pilot map	left-handed stick	red ponytail	hates bumpy air
Skipper	turbo prop	wind socks	right-handed stick	red ponytail	distracted by birds
Cloud	sea plane	wind socks	right-handed stick	silver buzzcut	distracted by birds
Amelia	sea plane	radar watch	right-handed stick	neon yellow dye	fear of thick fog
Wing	biplane	co-pilot map	left-handed stick	neon yellow dye	hates bumpy air
Sky	cargo glider	radar watch	left-handed stick	red ponytail	distracted by birds
Tex	stunt jet	co-pilot map	right-handed stick	neon yellow dye	fear of thick fog
Orville	biplane	co-pilot map	left-handed stick	silver buzzcut	fear of thick fog
Maverick	turbo prop	wind socks	left-handed stick	neon yellow dye	fear of thick fog
Jet	stunt jet	wind socks	right-handed stick	red ponytail	fear of thick fog
Dusty	cargo glider	radar watch	right-handed stick	red ponytail	distracted by birds
Charles	stunt jet	radar watch	right-handed stick	neon yellow dye	hates bumpy air
Piper	biplane	radar watch	left-handed stick	neon yellow dye	fear of thick fog
Chuck	stunt jet	co-pilot map	left-handed stick	neon yellow dye	fear of thick fog
Aero	turbo prop	propeller pin	left-handed stick	neon yellow dye	fear of thick fog
Wilbur	sea plane	radar watch	left-handed stick	neon yellow dye	hates bumpy air
Buster	biplane	wind socks	left-handed stick	neon yellow dye	distracted by birds
Dash	stunt jet	gps tablet	right-handed stick	silver buzzcut	hates bumpy air
Solo	cargo glider	gps tablet	left-handed stick	neon yellow dye	fear of thick fog
Sally	sea plane	propeller pin	right-handed stick	neon yellow dye	fear of thick fog

CLUE 1
Multiplication facts (1-12)

We need to count the rows of planes parked in the hangar. Let us find the total to get our first clue!

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

T 77	8	24	T 77	8	32	24	120	20	64	24	144	7	64	T 77	80	144	24	132	
16	54	144	T 77	132	96	42	24	T 77											

$7 \times 11 = \square \rightarrow \text{T}$	$7 \times 6 = \square \rightarrow \text{L}$	$4 \times 2 = \square \rightarrow \text{H}$	
$12 \times 12 = \square \rightarrow \text{S}$	$4 \times 8 = \square \rightarrow \text{I}$	$8 \times 10 = \square \rightarrow \text{U}$	
$12 \times 8 = \square \rightarrow \text{B}$	$4 \times 5 = \square \rightarrow \text{D}$	$1 \times 7 = \square \rightarrow \text{N}$	$8 \times 8 = \square \rightarrow \text{O}$
$12 \times 2 = \square \rightarrow \text{E}$	$8 \times 2 = \square \rightarrow \text{G}$	$12 \times 10 = \square \rightarrow \text{F}$	
$9 \times 6 = \square \rightarrow \text{P}$	$12 \times 11 = \square \rightarrow \text{A}$		

Scratch space:

CLUE 2

Rounding

The altimeter screen is fuzzy. Round the altitude numbers to the nearest ten to read the secret code.

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

T									T							
50	6000	20	700	500	70	2000	6000	50	500	30	2000	900	8000	3000		
													T			
3000	70	2000	800	20	600	5000	60	8000	500	20	700	50	60			

Round 46 to the nearest ten → **T**

Round 5,762 to the nearest thousand → **H**

Round 2,755 to the nearest thousand → **S**

Round 829 to the nearest hundred → **N**

Round 658 to the nearest hundred → **F**

Round 637 to the nearest hundred → **D**

Round 870 to the nearest hundred → **W**

Round 5,458 to the nearest thousand → **B**

Round 29 to the nearest ten → **O**

Round 62 to the nearest ten → **Y**

Round 20 to the nearest ten → **E**

Round 70 to the nearest ten → **I**

Round 7,993 to the nearest thousand → **A**

Round 489 to the nearest hundred → **L**

Round 1,854 to the nearest thousand → **G**

Scratch space:

CLUE 3 Addition

Let us add up the total weight of the luggage bags loaded onto the cargo plane to unlock this clue.

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

T																	
678	935	464	825	386	867	464	307	910	501	843	343	633	873	464	356	343	843

T										
678	935	464	935	464	501	268	867	825	492	330

$289 + 389 = \square \rightarrow \boxed{\text{T}}$

$229 + 101 = \square \rightarrow \boxed{\text{G}}$

$404 + 469 = \square \rightarrow \boxed{\text{K}}$

$305 + 630 = \square \rightarrow \boxed{\text{H}}$

$215 + 277 = \square \rightarrow \boxed{\text{O}}$

$236 + 228 = \square \rightarrow \boxed{\text{E}}$

$182 + 174 = \square \rightarrow \boxed{\text{D}}$

$297 + 546 = \square \rightarrow \boxed{\text{N}}$

$156 + 151 = \square \rightarrow \boxed{\text{R}}$

$574 + 251 = \square \rightarrow \boxed{\text{F}}$

$160 + 108 = \square \rightarrow \boxed{\text{V}}$

$389 + 244 = \square \rightarrow \boxed{\text{C}}$

$334 + 576 = \square \rightarrow \boxed{\text{P}}$

$348 + 153 = \square \rightarrow \boxed{\text{A}}$

$145 + 241 = \square \rightarrow \boxed{\text{L}}$

$421 + 446 = \square \rightarrow \boxed{\text{Y}}$

$238 + 105 = \square \rightarrow \boxed{\text{I}}$

Scratch space:

CLUE 4

Subtraction

Subtract the fuel we used from the starting tank amount to see how much we have left.

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

A																			
335	136	511	673	395	778	357	136	659	494	511	511	673	395	285	335	778	632		

	A										A		
395	335	509	509	110	654	790	276	110	673	551	778	335	511

$548 - 213 = \square \rightarrow \text{A}$

$1000 - 341 = \square \rightarrow \text{Y}$

$767 - 216 = \square \rightarrow \text{D}$

$575 - 81 = \square \rightarrow \text{E}$

$751 - 78 = \square \rightarrow \text{O}$

$673 - 397 = \square \rightarrow \text{K}$

$368 - 83 = \square \rightarrow \text{H}$

$775 - 264 = \square \rightarrow \text{L}$

$867 - 77 = \square \rightarrow \text{C}$

$1050 - 272 = \square \rightarrow \text{I}$

$605 - 248 = \square \rightarrow \text{N}$

$173 - 63 = \square \rightarrow \text{T}$

$652 - 143 = \square \rightarrow \text{S}$

$271 - 135 = \square \rightarrow \text{G}$

$715 - 320 = \square \rightarrow \text{W}$

$994 - 362 = \square \rightarrow \text{R}$

$690 - 36 = \square \rightarrow \text{U}$

Scratch space:

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

If we share the flight maps equally among the rescue teams, how many does each pilot get?

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:

$56 \div 7 = \boxed{}$

$48 \div 4 = \boxed{}$

$4 \div 1 = \boxed{}$

$12 \div 6 = \boxed{}$

$14 \div 2 = \boxed{}$

$15 \div 5 = \boxed{}$

$9 \div 9 = \boxed{}$

$35 \div 7 = \boxed{}$

$110 \div 11 = \boxed{}$

$54 \div 9 = \boxed{}$

$72 \div 8 = \boxed{}$

Step 2 - cross out the sentence with each answer:

1. The villain buzzes the runway lights, then blowing a loud foghorn.
2. The villain buzzes the runway lights, then waving a white scarf.
3. The villain takes off in a steep climb, then leaving a trail of pink smoke.
4. The villain takes off in a steep climb, then blowing a loud foghorn.
5. The villain zooms past the control tower, then leaving a trail of pink smoke.
6. The villain swoops low over the cornfield, then waving a white scarf.
7. The villain zooms past the control tower, then waving a white scarf.
8. The villain takes off in a steep climb, then waving a white scarf.
9. The villain buzzes the runway lights, then leaving a trail of pink smoke.
10. The villain swoops low over the cornfield, then dropping paper airplanes.
11. The villain zooms past the control tower, then dropping paper airplanes.
12. The villain loops around the big hangar, then leaving a trail of pink smoke.

Answer Key

The Case of the Lost Golden Propeller

Culprit: Piper

biplane · radar watch · left-handed stick · neon yellow dye · fear of thick fog

Trail: Start 21 → Clue 1 19 → Clue 2 10 → Clue 3 5 → Clue 4 4 → Clue 5 1

Clue 1 (Multiplication facts (1-12)): "THE THIEF DOES NOT USE A GPS TABLET"

$7 \times 11 = 77$ (T) · $7 \times 6 = 42$ (L) · $4 \times 2 = 8$ (H) · $12 \times 12 = 144$ (S) · $4 \times 8 = 32$ (I) · $8 \times 10 = 80$ (U) · $12 \times 8 = 96$ (B) · $4 \times 5 = 20$ (D) · $1 \times 7 = 7$ (N) · $8 \times 8 = 64$ (O) · $12 \times 2 = 24$ (E) · $8 \times 2 = 16$ (G) · $12 \times 10 = 120$ (F) · $9 \times 6 = 54$ (P) · $12 \times 11 = 132$ (A)

Clue 2 (Rounding): "THE FLIGHT LOG WAS SIGNED BY A LEFTY"

Round 46 to the nearest ten = 50 (T) · Round 5,762 to the nearest thousand = 6000 (H) · Round 2,755 to the nearest thousand = 3000 (S) · Round 829 to the nearest hundred = 800 (N) · Round 658 to the nearest hundred = 700 (F) · Round 637 to the nearest hundred = 600 (D) · Round 870 to the nearest hundred = 900 (W) · Round 5,458 to the nearest thousand = 5000 (B) · Round 29 to the nearest ten = 30 (O) · Round 62 to the nearest ten = 60 (Y) · Round 20 to the nearest ten = 20 (E) · Round 70 to the nearest ten = 70 (I) · Round 7,993 to the nearest thousand = 8000 (A) · Round 489 to the nearest hundred = 500 (L) · Round 1,854 to the nearest thousand = 2000 (G)

Clue 3 (Addition): "THE FLYER PANICKED IN THE HEAVY FOG"

$289 + 389 = 678$ (T) · $229 + 101 = 330$ (G) · $404 + 469 = 873$ (K) · $305 + 630 = 935$ (H) · $215 + 277 = 492$ (O) · $236 + 228 = 464$ (E) · $182 + 174 = 356$ (D) · $297 + 546 = 843$ (N) · $156 + 151 = 307$ (R) · $574 + 251 = 825$ (F) · $160 + 108 = 268$ (V) · $389 + 244 = 633$ (C) · $334 + 576 = 910$ (P) · $348 + 153 = 501$ (A) · $145 + 241 = 386$ (L) · $421 + 446 = 867$ (Y) · $238 + 105 = 343$ (I)

Clue 4 (Subtraction): "A GLOWING YELLOW HAIR WAS STUCK TO DIAL"

$548 - 213 = 335$ (A) · $1000 - 341 = 659$ (Y) · $767 - 216 = 551$ (D) · $575 - 81 = 494$ (E) · $751 - 78 = 673$ (O) · $673 - 397 = 276$ (K) · $368 - 83 = 285$ (H) · $775 - 264 = 511$ (L) · $867 - 77 = 790$ (C) · $1050 - 272 = 778$ (I) · $605 - 248 = 357$ (N) · $173 - 63 = 110$ (T) · $652 - 143 = 509$ (S) · $271 - 135 = 136$ (G) · $715 - 320 = 395$ (W) · $994 - 362 = 632$ (R) · $690 - 36 = 654$ (U)

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

$56 \div 7 = 8$ · $48 \div 4 = 12$ · $4 \div 1 = 4$ · $12 \div 6 = 2$ · $14 \div 2 = 7$ · $15 \div 5 = 3$ · $9 \div 9 = 1$ · $35 \div 7 = 5$ · $110 \div 11 = 10$ · $54 \div 9 = 6$ · $72 \div 8 = 9$