



The Golden Propeller Caper

Grade 6 math · Percentages, Exponents, Order of operations, Multiplication, Division · Reading level grades 1-2

Detective: _____ **Date:** _____

Someone took the Golden Propeller! Skytopia will sink without it. The Chief Balloon Maker needs your help. Track the sky bandit fast!

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	SKY GADGET	CLOUD GEAR	STEERING HAND	HELMET COLOR	SILLY WEAKNESS
Huckleberry	wind blaster	radar map	right handed wheel turn	bright blue helmet	sticky honey
Calico Jack	wind blaster	zipline rope	right handed wheel turn	shiny gold helmet	bubbly soap
Hardy	propeller boots	fog machine	right handed wheel turn	shiny gold helmet	sticky honey
Tarzan	grappling hook	laser glow	left handed wheel turn	neon red helmet	bubbly soap
Aladdin	magnet glove	fog machine	right handed wheel turn	shiny gold helmet	bubbly soap
Amelia	grappling hook	zipline rope	right handed wheel turn	bright blue helmet	bubbly soap
Barnaby	magnet glove	laser glow	right handed wheel turn	bright blue helmet	bubbly soap
Captain Jack	grappling hook	laser glow	left handed wheel turn	bright blue helmet	sticky honey
Watson	magnet glove	solar shield	left handed wheel turn	shiny gold helmet	sticky honey
Lara	grappling hook	zipline rope	right handed wheel turn	bright blue helmet	sticky honey
Indiana	cloud glider	laser glow	right handed wheel turn	shiny gold helmet	sticky honey
Tom Sawyer	propeller boots	zipline rope	right handed wheel turn	neon red helmet	sticky honey
Peter Pan	grappling hook	zipline rope	left handed wheel turn	shiny gold helmet	sticky honey
Nancy Drew	propeller boots	laser glow	left handed wheel turn	neon red helmet	sticky honey
Sherlock	grappling hook	solar shield	right handed wheel turn	shiny gold helmet	sticky honey
Captain Hook	cloud glider	solar shield	right handed wheel turn	shiny gold helmet	sticky honey
Blackbeard	magnet glove	fog machine	left handed wheel turn	shiny gold helmet	sticky honey
Diego	magnet glove	solar shield	right handed wheel turn	shiny gold helmet	loud whistles
Sally	grappling hook	fog machine	right handed wheel turn	shiny gold helmet	sticky honey
Sinbad	cloud glider	radar map	right handed wheel turn	neon red helmet	sticky honey
Marco Polo	wind blaster	fog machine	left handed wheel turn	neon red helmet	sticky honey

CLUE 1

9

17 27 29 30 37 25 32 41 17 32 33 29 11 25 33 17 24 11 29

37 18 37 11 29 4 10 18 33 23

20% of 85 = → **T**

20% of 55 = → **S**

50% of 48 = →

5% of 740 = → **A**

50% of 46 = → **W**

50% of 66 = → ☐

10% of 410 = →

25% of 16 = → **R**

75% of 24 = → **L**

20% of 150 = → **B**

25% of 116 = → **E**

75% of 36 = → **H**

25% of 128 = → **D**

25% of 100 = → **N**

40% of 25 = → **G**

S

CLUE 2 Exponents

The cloud power box has small numbers floating above it. They are exponents.

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

T							T						T					
400	4	225	289	144	361	32	400	225	16	216	225	25	400	4	225	144	361	

				T					T			T					
361	144	64	4	400	4	32	128	25	400	121	216	400	225	225	361		

$20^2 = \square \rightarrow \text{[T]}$	$8^2 = \square \rightarrow \text{[G]}$	$2^7 = \square \rightarrow \text{[N]}$	$2^2 = \square \rightarrow \text{[H]}$
$2^5 = \square \rightarrow \text{[A]}$	$17^2 = \square \rightarrow \text{[P]}$	$2^4 = \square \rightarrow \text{[U]}$	$15^2 = \square \rightarrow \text{[E]}$
$5^2 = \square \rightarrow \text{[D]}$	$19^2 = \square \rightarrow \text{[R]}$	$11^2 = \square \rightarrow \text{[O]}$	$12^2 = \square \rightarrow \text{[I]}$
$6^3 = \square \rightarrow \text{[S]}$			

Scratch space:

CLUE 3

Order of operations

We must press the ship buttons in the correct order to open the safe.

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

T						T		T										
20	45	51	10	8	38	20	55	20	72	17	44	70	13	11	33	11	79	

			T										
38	19	55	20	70	17	44	10	45	38	13	51	10	

$4 \times 12 - 28 = \square \rightarrow \boxed{\text{T}}$

$7 \times 9 - 8 = \square \rightarrow \boxed{\text{S}}$

$4 \times 10 - 23 = \square \rightarrow \boxed{\text{C}}$

$2 \times 10 - 1 = \square \rightarrow \boxed{\text{F}}$

$4 + 2 \times 2 = \square \rightarrow \boxed{\text{G}}$

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

$6 + 5 \times 9 = \square \rightarrow \boxed{\text{E}}$

$24 + 6 \times 8 = \square \rightarrow \boxed{\text{U}}$

$6 + 9 \times 3 = \square \rightarrow \boxed{\text{J}}$

$50 + 4 \times 5 = \square \rightarrow \boxed{\text{I}}$

$4 \times 7 - 17 = \square \rightarrow \boxed{\text{A}}$

$5 + 4 \times 2 = \square \rightarrow \boxed{\text{N}}$

$5 + 5 \times 8 = \square \rightarrow \boxed{\text{H}}$

$12 \times 5 - 22 = \square \rightarrow \boxed{\text{O}}$

$65 + 7 \times 2 = \square \rightarrow \boxed{\text{R}}$

$4 + 3 \times 2 = \square \rightarrow \boxed{\text{Y}}$

Scratch space:

CLUE 4
Multiplication facts (1-12)

The bandit dropped some golden coins in equal rows on the deck.

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

W														
50	84	27	88	3	4	5	144	110	42	84	33	49	88	27

110	81	54	4	56	77	88	45	5	81	84	45	24	84	70	42	144	54	4	70

$10 \times 5 = \square \rightarrow \text{W}$

$9 \times 3 = \square \rightarrow \text{F}$

$11 \times 10 = \square \rightarrow \text{S}$

$7 \times 10 = \square \rightarrow \text{T}$

$7 \times 7 = \square \rightarrow \text{K}$

$7 \times 12 = \square \rightarrow \text{E}$

$1 \times 5 = \square \rightarrow \text{D}$

$11 \times 8 = \square \rightarrow \text{O}$

$7 \times 8 = \square \rightarrow \text{Y}$

$3 \times 11 = \square \rightarrow \text{C}$

$6 \times 7 = \square \rightarrow \text{P}$

$1 \times 3 = \square \rightarrow \text{U}$

$9 \times 6 = \square \rightarrow \text{I}$

$9 \times 9 = \square \rightarrow \text{H}$

$8 \times 3 = \square \rightarrow \text{M}$

$5 \times 9 = \square \rightarrow \text{L}$

$1 \times 4 = \square \rightarrow \text{N}$

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

$12 \times 12 = \square \rightarrow \text{A}$

Scratch space:

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

We need to share these magic maps equally among the rescue crew.

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:

$7 \div 1 = \boxed{}$

$10 \div 10 = \boxed{}$

$12 \div 1 = \boxed{}$

$5 \div 1 = \boxed{}$

$99 \div 9 = \boxed{}$

$48 \div 8 = \boxed{}$

$16 \div 8 = \boxed{}$

$96 \div 12 = \boxed{}$

$21 \div 7 = \boxed{}$

$60 \div 6 = \boxed{}$

$36 \div 9 = \boxed{}$

Step 2 - cross out the sentence with each answer:

1. The villain glides on a fabric wing, then blocks the bright sun.
2. The villain blasts a gust of wind, then shines a bright light.
3. The villain blasts a gust of wind, then scans the area with a screen.
4. The villain grabs metal walls, then shines a bright light.
5. The villain grabs metal walls, then blocks the bright sun.
6. The villain blasts a gust of wind, then hides in a puff of smoke.
7. The villain swings from a rope, then hides in a puff of smoke.
8. The villain blasts a gust of wind, then blocks the bright sun.
9. The villain zooms on booster boots, then hides in a puff of smoke.
10. The villain glides on a fabric wing, then shines a bright light.
11. The villain swings from a rope, then scans the area with a screen.
12. The villain swings from a rope, then blocks the bright sun.

Answer Key

The Golden Propeller Caper

Culprit: Hardy

propeller boots · fog machine · right handed wheel turn · shiny gold helmet · sticky honey

Trail: Start 21 → Clue 1 16 → Clue 2 12 → Clue 3 8 → Clue 4 4 → Clue 5 1

Clue 1 (Percentages): "THE BANDIT DOES NOT USE A LASER GLOW"

20% of 85 = 17 (T) · 20% of 55 = 11 (S) · 50% of 48 = 24 (U) · 5% of 740 = 37 (A) · 50% of 46 = 23 (W) · 50% of 66 = 33 (O) · 10% of 410 = 41 (I) · 25% of 16 = 4 (R) · 75% of 24 = 18 (L) · 20% of 150 = 30 (B) · 25% of 116 = 29 (E) · 75% of 36 = 27 (H) · 25% of 128 = 32 (D) · 25% of 100 = 25 (N) · 40% of 25 = 10 (G)

Clue 2 (Exponents): "THE PIRATE USED THEIR RIGHT HAND TO STEER"

$20^2 = 400$ (T) · $8^2 = 64$ (G) · $2^7 = 128$ (N) · $2^2 = 4$ (H) · $2^5 = 32$ (A) · $17^2 = 289$ (P) · $2^4 = 16$ (U) · $15^2 = 225$ (E) · $5^2 = 25$ (D) · $19^2 = 361$ (R) · $11^2 = 121$ (O) · $12^2 = 144$ (I) · $6^3 = 216$ (S)

Clue 3 (Order of operations): "THEY GOT STUCK IN A JAR OF STICKY HONEY"

$4 \times 12 - 28 = 20$ (T) · $7 \times 9 - 8 = 55$ (S) · $4 \times 10 - 23 = 17$ (C) · $2 \times 10 - 1 = 19$ (F) · $4 + 2 \times 2 = 8$ (G) · $9 + 5 \times 7 = 44$ (K) · $6 + 5 \times 9 = 51$ (E) · $24 + 6 \times 8 = 72$ (U) · $6 + 9 \times 3 = 33$ (J) · $50 + 4 \times 5 = 70$ (I) · $4 \times 7 - 17 = 11$ (A) · $5 + 4 \times 2 = 13$ (N) · $5 + 5 \times 8 = 45$ (H) · $12 \times 5 - 22 = 38$ (O) · $65 + 7 \times 2 = 79$ (R) · $4 + 3 \times 2 = 10$ (Y)

Clue 4 (Multiplication facts (1-12)): "WE FOUND A SPECK OF SHINY GOLD HELMET PAINT"

$10 \times 5 = 50$ (W) · $9 \times 3 = 27$ (F) · $11 \times 10 = 110$ (S) · $7 \times 10 = 70$ (T) · $7 \times 7 = 49$ (K) · $7 \times 12 = 84$ (E) · $1 \times 5 = 5$ (D) · $11 \times 8 = 88$ (O) · $7 \times 8 = 56$ (Y) · $3 \times 11 = 33$ (C) · $6 \times 7 = 42$ (P) · $1 \times 3 = 3$ (U) · $9 \times 6 = 54$ (I) · $9 \times 9 = 81$ (H) · $8 \times 3 = 24$ (M) · $5 \times 9 = 45$ (L) · $1 \times 4 = 4$ (N) · $7 \times 11 = 77$ (G) · $12 \times 12 = 144$ (A)

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

$7 \div 1 = 7$ · $10 \div 10 = 1$ · $12 \div 1 = 12$ · $5 \div 1 = 5$ · $99 \div 9 = 11$ · $48 \div 8 = 6$ · $16 \div 8 = 2$ · $96 \div 12 = 8$ · $21 \div 7 = 3$ · $60 \div 6 = 10$ · $36 \div 9 = 4$