



The Great Balloon Chase

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

Detective: _____ **Date:** _____

A sneaky bandit popped all the balloons in the Sky Workshop! Then they ran off with the Golden Teddy Bear. Detective, we must track them down before the sun sets.

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 Bubble Thief is _____

Possible suspects

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

NAME	SKY GEAR	GLOVE TOOL	GOGGLE COLOR	HAIR STYLE	SECRET FEAR
Lily	rope lasso	sparkler wand	wears red goggles	orange hair	hates sour candy
Otis	cloud surfboard	slime launcher	wears red goggles	green hair	scared of frogs
Hugo	wind whistle	glow lantern	wears red goggles	orange hair	scared of frogs
Mia	rope lasso	magnet glove	wears red goggles	pink hair	tickled by feathers
Sam	cloud surfboard	net blaster	wears red goggles	orange hair	hates sour candy
Ben	cloud surfboard	slime launcher	wears red goggles	orange hair	tickled by feathers
Gus	rope lasso	net blaster	wears red goggles	orange hair	scared of frogs
Zack	rope lasso	slime launcher	wears blue goggles	green hair	hates sour candy
Toby	cloud surfboard	magnet glove	wears red goggles	orange hair	scared of frogs
Jack	cloud surfboard	sparkler wand	wears red goggles	orange hair	scared of frogs
Abby	wind whistle	net blaster	wears red goggles	green hair	scared of frogs
Cleo	bubble glider	magnet glove	wears blue goggles	pink hair	tickled by feathers
Leo	rope lasso	net blaster	wears red goggles	orange hair	tickled by feathers
Max	spring shoes	sparkler wand	wears blue goggles	orange hair	tickled by feathers
Luna	bubble glider	slime launcher	wears blue goggles	pink hair	scared of frogs
Lucy	rope lasso	slime launcher	wears blue goggles	green hair	tickled by feathers
Finn	spring shoes	sparkler wand	wears blue goggles	orange hair	scared of frogs
Ruby	wind whistle	sparkler wand	wears red goggles	green hair	tickled by feathers
Sari	cloud surfboard	glow lantern	wears red goggles	orange hair	scared of frogs
Zoe	bubble glider	magnet glove	wears blue goggles	green hair	hates sour candy
Nico	spring shoes	net blaster	wears red goggles	orange hair	scared of frogs

CLUE 1 Addition

We need to pack our bags for the sky hunt. Help me count how many rope ropes and maps we have in the closet.

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

T 5763	5681	3662	T 5763	5681	7350	3662	6475	3579	9603	3662	2852	9845	9603	T 5763	5681	3708	9288	3662
3708	8266	4928	9603	2844	4928	3708	9845	T 5763	3662	8354	9845							

$2614 + 3149 = \square \rightarrow \text{T}$	$3126 + 4224 = \square \rightarrow \text{I}$	$1834 + 1828 = \square \rightarrow \text{E}$
$5576 + 3712 = \square \rightarrow \text{V}$	$2371 + 2557 = \square \rightarrow \text{L}$	$3806 + 1875 = \square \rightarrow \text{H}$
$1262 + 1590 = \square \rightarrow \text{S}$	$1873 + 1706 = \square \rightarrow \text{D}$	$5885 + 3718 = \square \rightarrow \text{O}$
$2739 + 5615 = \square \rightarrow \text{R}$	$5761 + 2505 = \square \rightarrow \text{G}$	$1918 + 926 = \square \rightarrow \text{W}$
$2153 + 1555 = \square \rightarrow \text{A}$	$3352 + 3123 = \square \rightarrow \text{F}$	$4775 + 5070 = \square \rightarrow \text{N}$

Scratch space:

CLUE 2 Percentages

The battery on our bubble detector is low. We must find the correct power charge to boot it back up.

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

T																		
8	16	33	45	13	45	3	33	19	8	2	33	39	32	45	32	33	7	

36	38	36	36	41	33	45

$5\% \text{ of } 160 = \boxed{} \rightarrow \boxed{\text{T}}$

$25\% \text{ of } 132 = \boxed{} \rightarrow \boxed{\text{E}}$

$25\% \text{ of } 152 = \boxed{} \rightarrow \boxed{\text{O}}$

$10\% \text{ of } 360 = \boxed{} \rightarrow \boxed{\text{G}}$

$50\% \text{ of } 78 = \boxed{} \rightarrow \boxed{\text{A}}$

$20\% \text{ of } 10 = \boxed{} \rightarrow \boxed{\text{W}}$

$25\% \text{ of } 180 = \boxed{} \rightarrow \boxed{\text{S}}$

$50\% \text{ of } 32 = \boxed{} \rightarrow \boxed{\text{H}}$

$25\% \text{ of } 52 = \boxed{} \rightarrow \boxed{\text{U}}$

$60\% \text{ of } 5 = \boxed{} \rightarrow \boxed{\text{P}}$

$25\% \text{ of } 76 = \boxed{} \rightarrow \boxed{\text{C}}$

$20\% \text{ of } 205 = \boxed{} \rightarrow \boxed{\text{L}}$

$25\% \text{ of } 28 = \boxed{} \rightarrow \boxed{\text{D}}$

$40\% \text{ of } 80 = \boxed{} \rightarrow \boxed{\text{R}}$

Scratch space:

CLUE 3

Exponents

The path is blocked by magic square tiles. If we step on the right numbers they will multiply and make a bridge.

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

T															
8	256	196	81	400	196	25	16	16	100	121	64	196	144	400	81

81	64	400	343	16

$2^3 = \square \rightarrow \boxed{\text{T}}$

$20^2 = \square \rightarrow \boxed{\text{O}}$

$7^3 = \square \rightarrow \boxed{\text{G}}$

$3^4 = \square \rightarrow \boxed{\text{F}}$

$5^2 = \square \rightarrow \boxed{\text{I}}$

$2^4 = \square \rightarrow \boxed{\text{S}}$

$2^6 = \square \rightarrow \boxed{\text{R}}$

$14^2 = \square \rightarrow \boxed{\text{E}}$

$10^2 = \square \rightarrow \boxed{\text{C}}$

$11^2 = \square \rightarrow \boxed{\text{A}}$

$16^2 = \square \rightarrow \boxed{\text{H}}$

$12^2 = \square \rightarrow \boxed{\text{D}}$

Scratch space:

CLUE 4

Order of operations

We found a locked gate on the cloud. Solve this multi-step code to open the latch in the proper order.

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

T																		
14	53	75	56	27	49	49	32	27	62	53	32	69	33	21	32	62	31	75

53	32	27	21

$6 \times 6 - 22 = \square \rightarrow \boxed{\text{T}}$

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

$39 + 4 \times 9 = \square \rightarrow \boxed{\text{E}}$

$11 + 5 \times 9 = \square \rightarrow \boxed{\text{V}}$

$6 \times 12 - 3 = \square \rightarrow \boxed{\text{S}}$

$41 + 6 \times 2 = \square \rightarrow \boxed{\text{H}}$

$3 \times 12 - 15 = \square \rightarrow \boxed{\text{R}}$

$21 + 3 \times 4 = \square \rightarrow \boxed{\text{O}}$

$6 \times 8 - 16 = \square \rightarrow \boxed{\text{A}}$

$7 \times 11 - 28 = \square \rightarrow \boxed{\text{L}}$

$7 \times 9 - 1 = \square \rightarrow \boxed{\text{N}}$

$8 \times 4 - 1 = \square \rightarrow \boxed{\text{G}}$

Scratch space:

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

Let us share these sticky star candies equally among the scout team so we all have the same amount.

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:

$12 \div 3 = \boxed{}$

$16 \div 8 = \boxed{}$

$24 \div 2 = \boxed{}$

$8 \div 8 = \boxed{}$

$55 \div 5 = \boxed{}$

$10 \div 1 = \boxed{}$

$25 \div 5 = \boxed{}$

$12 \div 2 = \boxed{}$

$70 \div 10 = \boxed{}$

$90 \div 10 = \boxed{}$

$24 \div 8 = \boxed{}$

Step 2 - cross out the sentence with each answer:

1. The villain swings with a rope lasso, then zaps with a sparkler wand.
2. The villain rides a cloud surfboard, then pulls metal with a magnet glove.
3. The villain swings with a rope lasso, then splats with a slime launcher.
4. The villain swings with a rope lasso, then shoots a net blaster.
5. The villain floats on a bubble glider, then pulls metal with a magnet glove.
6. The villain blows a wind whistle, then zaps with a sparkler wand.
7. The villain swings with a rope lasso, then shines a glow lantern.
8. The villain rides a cloud surfboard, then zaps with a sparkler wand.
9. The villain blows a wind whistle, then shines a glow lantern.
10. The villain swings with a rope lasso, then pulls metal with a magnet glove.
11. The villain floats on a bubble glider, then shoots a net blaster.
12. The villain jumps with spring shoes, then shoots a net blaster.

Answer Key

The Great Balloon Chase

Culprit: Jack

cloud surfboard · sparkler wand · wears red goggles · orange hair · scared of frogs

Trail: Start 21 → Clue 1 19 → Clue 2 12 → Clue 3 6 → Clue 4 4 → Clue 5 1

Clue 1 (Addition): "THE THIEF DOES NOT HAVE A GLOW LANTERN"

$2614 + 3149 = 5763$ (T) · $3126 + 4224 = 7350$ (I) · $1834 + 1828 = 3662$ (E) · $5576 + 3712 = 9288$ (V) · $2371 + 2557 = 4928$ (L) · $3806 + 1875 = 5681$ (H) · $1262 + 1590 = 2852$ (S) · $1873 + 1706 = 3579$ (D) · $5885 + 3718 = 9603$ (O) · $2739 + 5615 = 8354$ (R) · $5761 + 2505 = 8266$ (G) · $1918 + 926 = 2844$ (W) · $2153 + 1555 = 3708$ (A) · $3352 + 3123 = 6475$ (F) · $4775 + 5070 = 9845$ (N)

Clue 2 (Percentages): "THE SUSPECT WEARS RED GOGGLES"

5% of 160 = 8 (T) · 25% of 132 = 33 (E) · 25% of 152 = 38 (O) · 10% of 360 = 36 (G) · 50% of 78 = 39 (A) · 20% of 10 = 2 (W) · 25% of 180 = 45 (S) · 50% of 32 = 16 (H) · 25% of 52 = 13 (U) · 60% of 5 = 3 (P) · 25% of 76 = 19 (C) · 20% of 205 = 41 (L) · 25% of 28 = 7 (D) · 40% of 80 = 32 (R)

Clue 3 (Exponents): "THE FOE IS SCARED OF FROGS"

$2^3 = 8$ (T) · $20^2 = 400$ (O) · $7^3 = 343$ (G) · $3^4 = 81$ (F) · $5^2 = 25$ (I) · $2^4 = 16$ (S) · $2^6 = 64$ (R) · $14^2 = 196$ (E) · $10^2 = 100$ (C) · $11^2 = 121$ (A) · $16^2 = 256$ (H) · $12^2 = 144$ (D)

Clue 4 (Order of operations): "THE VILLAIN HAS ORANGE HAIR"

$6 \times 6 - 22 = 14$ (T) · $9 + 3 \times 6 = 27$ (I) · $39 + 4 \times 9 = 75$ (E) · $11 + 5 \times 9 = 56$ (V) · $6 \times 12 - 3 = 69$ (S) · $41 + 6 \times 2 = 53$ (H) · $3 \times 12 - 15 = 21$ (R) · $21 + 3 \times 4 = 33$ (O) · $6 \times 8 - 16 = 32$ (A) · $7 \times 11 - 28 = 49$ (L) · $7 \times 9 - 1 = 62$ (N) · $8 \times 4 - 1 = 31$ (G)

Clue 5 (Division facts (1-12)): surviving statement is box 8 → Jack

$12 \div 3 = 4$ · $16 \div 8 = 2$ · $24 \div 2 = 12$ · $8 \div 8 = 1$ · $55 \div 5 = 11$ · $10 \div 1 = 10$ · $25 \div 5 = 5$ · $12 \div 2 = 6$ · $70 \div 10 = 7$ · $90 \div 10 = 9$ · $24 \div 8 = 3$