



The Great Castle Crumble

Grade 2 math · Place value, Addition, Subtraction, Skip counting, Missing addends · Reading level grades 3-4

Detective: _____ **Date:** _____

Someone has raided the royal kitchens of Stonefly Castle and eaten all the sweet honey buns! The Royal Bread-Baker is in tears. A sneaky rogue dragon was spotted flying away from the pantry tower. Use your detective skills to find the hungry dragon before the next feast is ruined!

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 rogue dragon is _____

Possible suspects

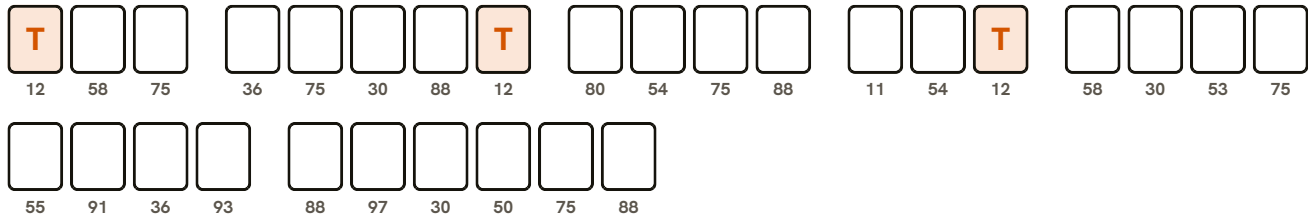
Cross off a row as each clue rules it out. The one left at the end is the culprit.

NAME	BREATH WEAPON	SPECIAL SCALES	DRAGON TYPE	TAIL TIP STYLE	FAVORITE TREAT TO STOP THEM
Clawdia	purple lightning spark	smooth sapphire scales	winged drake	heavy stone club	smelly cheese wheels
Glimmer	purple lightning spark	bumpy ruby scales	winged drake	heavy stone club	smelly cheese wheels
Barnaby	hot orange flame	smooth sapphire scales	crested wyvern	heavy stone club	sweet apple tarts
Gemma	purple lightning spark	bumpy ruby scales	crested wyvern	sharp iron spike	smelly cheese wheels
Ash	hot orange flame	shiny emerald scales	winged drake	sharp iron spike	smelly cheese wheels
Scorch	sparkling frost breath	glowing gold scales	winged drake	soft feather tuft	smelly cheese wheels
Ember	thick black smoke	glowing gold scales	winged drake	soft feather tuft	sweet apple tarts
Flicker	hot orange flame	bumpy ruby scales	winged drake	heavy stone club	salty sea kelp
Wyvern	sparkling frost breath	spiky silver scales	crested wyvern	soft feather tuft	sweet apple tarts
Cinder	hot orange flame	glowing gold scales	winged drake	heavy stone club	smelly cheese wheels
Sparky	hot orange flame	shiny emerald scales	winged drake	heavy stone club	salty sea kelp
Blaze	sparkling frost breath	bumpy ruby scales	winged drake	heavy stone club	sweet apple tarts
Drake	green acid spray	glowing gold scales	winged drake	heavy stone club	smelly cheese wheels
Pyro	hot orange flame	smooth sapphire scales	crested wyvern	soft feather tuft	salty sea kelp
Scalez	sparkling frost breath	shiny emerald scales	crested wyvern	heavy stone club	smelly cheese wheels
Spike	purple lightning spark	smooth sapphire scales	crested wyvern	sharp iron spike	salty sea kelp
Talon	hot orange flame	smooth sapphire scales	winged drake	heavy stone club	sweet apple tarts
Boulder	green acid spray	shiny emerald scales	crested wyvern	sharp iron spike	sweet apple tarts
Ignis	hot orange flame	shiny emerald scales	winged drake	heavy stone club	smelly cheese wheels
Puff	hot orange flame	bumpy ruby scales	winged drake	heavy stone club	smelly cheese wheels
Pippin	hot orange flame	spiky silver scales	winged drake	sharp iron spike	smelly cheese wheels

CLUE 1
Place value (tens & ones)

Sir Gallant counts the golden bricks on the castle wall. The tens and ones blocks match a secret room number.

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



What number has 1 ten and 2 ones?

→

T

What number has 5 tens and 0 ones?

→

L

What number has 9 tens and 7 ones?

→

C

What number has 5 tens and 4 ones?

→

O

What number has 5 tens and 5 ones?

→

R

What number has 8 tens and 8 ones?

→

S

What number has 3 tens and 6 ones?

→

B

What number has 3 tens and 0 ones?

→

A

What number has 1 ten and 1 one?

→

N

What number has 8 tens and 0 ones?

→

D

What number has 5 tens and 3 ones?

→

V

What number has 5 tens and 8 ones?

→

H

What number has 9 tens and 3 ones?

→

Y

What number has 9 tens and 1 one?

→

U

What number has 7 tens and 5 ones?

→

E

Scratch space:

CLUE 2

Addition

The royal guards gather all the dropped shield pieces. They must add the piles together to find the true count.

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

T					T								
89	64	69	41	79	89	95	69	22	22	22	86	41	86

41	79	95	50	69	44	44	32	86	29	69

$37 + 52 = \square \rightarrow \boxed{\text{T}}$

$28 + 58 = \square \rightarrow \boxed{\text{A}}$

$8 + 14 = \square \rightarrow \boxed{\text{S}}$

$21 + 11 = \square \rightarrow \boxed{\text{R}}$

$58 + 37 = \square \rightarrow \boxed{\text{N}}$

$55 + 24 = \square \rightarrow \boxed{\text{I}}$

$15 + 35 = \square \rightarrow \boxed{\text{G}}$

$23 + 46 = \square \rightarrow \boxed{\text{E}}$

$14 + 27 = \square \rightarrow \boxed{\text{W}}$

$20 + 9 = \square \rightarrow \boxed{\text{K}}$

$19 + 45 = \square \rightarrow \boxed{\text{H}}$

$19 + 25 = \square \rightarrow \boxed{\text{D}}$

Scratch space:

Subtraction

A greedy dragon stole some silver spoons from the great hall. We must subtract what is left to see how many are gone.

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

The diagram illustrates a sequence of numbers arranged in two rows. The top row contains 14 boxes, and the bottom row contains 9 boxes. Some boxes are shaded orange and contain the letter 'S', indicating a specific state or action. Below each box is a number.

Row	Box Index	Box Content	Number Below
Top	1	S	64
Top	2		23
Top	3		33
Top	4		11
Top	5		11
Top	6		79
Top	7		50
Top	8		83
Top	9		33
Top	10		33
Top	11	S	64
Top	12		33
Top	13		38
Top	14		51
Top	15		11
Top	16		11
Top	17	S	64
Top	18		88
Top	19		30
Top	20		39
Bottom	1		88
Bottom	2		83
Bottom	3		51
Bottom	4	S	64
Bottom	5		69
Bottom	6		33
Bottom	7		81
Bottom	8	S	64
Bottom	9		88

$67 - 3 = \boxed{} \rightarrow \boxed{\text{S}}$

$109 - 40 = \boxed{} \rightarrow \boxed{\mathbf{B}}$

$$30 - 19 = \boxed{} \rightarrow \boxed{\text{L}}$$

$83 - 4 = \boxed{} \rightarrow \boxed{\text{Y}}$

$$108 - 20 = \boxed{} \rightarrow \boxed{\text{T}}$$

$56 - 33 = \boxed{} \rightarrow \boxed{\text{M}}$

$$83 - 32 = \boxed{} \rightarrow \boxed{}$$

$$114 - 31 = \boxed{} \rightarrow \boxed{\text{H}}$$

$$47 - 17 = \boxed{} \rightarrow \boxed{0}$$

$58 - 19 = \boxed{} \rightarrow \boxed{\text{P}}$

$69 - 19 = \boxed{} \rightarrow \boxed{\text{C}}$

$55 - 22 = \boxed{} \rightarrow \boxed{\text{E}}$

$42 - 4 = \boxed{} \rightarrow \boxed{\mathbf{W}}$

$99 - 18 = \square \rightarrow \boxed{\mathbf{A}}$

Scratch space:

CLUE 4 Skip counting

The wizard follows a trail of muddy claw prints up the spiral tower. The prints are spaced out in a skip counting pattern.

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

T			T														
28	25	140	28	39	65	27	26	27	6	18	70	120	39	70	25	140	33
70	28	21	36	140													

Skip-count by 2s. Fill the blank: 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, 26, __, 30, 32 → **T**

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

Skip-count by 2s. Fill the blank: 2, 4, __, 8, 10 → **U**

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

Skip-count by 2s. Fill the blank: 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, __, 28, 30 → **C**

Skip-count by 5s. Fill the blank: 5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 55, 60, __, 70, 75 → **I**

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

Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, 60, 70, 80, 90, 100, 110, 120, 130, __, 150, 160 → **E**

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

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

Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, 21, 24, 27, 30, 33, __, 39, 42 → **N**

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

Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, __, 24, 27 → **O**

Skip-count by 5s. Fill the blank: 5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 55, 60, 65, __, 75, 80 → **S**

Scratch space:

CLUE 5**Missing addends - the last clue**

The castle chef needs twenty magical berries for a pie. He has twelve and must figure out how many more are missing.

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:

$3 + \underline{\quad} = 13$

$3 + \underline{\quad} = 7$

$10 + \underline{\quad} = 13$

$1 + \underline{\quad} = 3$

$5 + \underline{\quad} = 13$

$5 + \underline{\quad} = 17$

$9 + \underline{\quad} = 16$

$2 + \underline{\quad} = 7$

$1 + \underline{\quad} = 2$

$6 + \underline{\quad} = 17$

$9 + \underline{\quad} = 18$

Step 2 - cross out the sentence with each answer:

1. The villain zaps the pantry lock with sparks, then clinks against the castle guard rails.
2. The villain zaps the pantry lock with sparks, then scratches the stone walls.
3. The villain melts the castle door with acid, then shines brightly in the dark.
4. The villain zaps the pantry lock with sparks, then reflects the blue torchlight.
5. The villain toasts the kitchen roof with fire, then scratches the stone walls.
6. The villain toasts the kitchen roof with fire, then leaves green sparkles on the floor.
7. The villain zaps the pantry lock with sparks, then leaves green sparkles on the floor.
8. The villain fills the bakery with dark smoke, then leaves green sparkles on the floor.
9. The villain fills the bakery with dark smoke, then scratches the stone walls.
10. The villain toasts the kitchen roof with fire, then shines brightly in the dark.
11. The villain freezes the kitchen moat solid, then scratches the stone walls.
12. The villain melts the castle door with acid, then clinks against the castle guard rails.

Answer Key

The Great Castle Crumble

Culprit: Ignis

hot orange flame · shiny emerald scales · winged drake · heavy stone club · smelly cheese wheels

Trail: Start 21 → Clue 1 16 → Clue 2 10 → Clue 3 7 → Clue 4 4 → Clue 5 1

Clue 1 (Place value (tens & ones)): "THE BEAST DOES NOT HAVE RUBY SCALES"

What number has 1 ten and 2 ones? = 12 (T) · What number has 5 tens and 0 ones? = 50 (L) · What number has 9 tens and 7 ones? = 97 (C) · What number has 5 tens and 4 ones? = 54 (O) · What number has 5 tens and 5 ones? = 55 (R) · What number has 8 tens and 8 ones? = 88 (S) · What number has 3 tens and 6 ones? = 36 (B) · What number has 3 tens and 0 ones? = 30 (A) · What number has 1 ten and 1 one? = 11 (N) · What number has 8 tens and 0 ones? = 80 (D) · What number has 5 tens and 3 ones? = 53 (V) · What number has 5 tens and 8 ones? = 58 (H) · What number has 9 tens and 3 ones? = 93 (Y) · What number has 9 tens and 1 one? = 91 (U) · What number has 7 tens and 5 ones? = 75 (E)

Clue 2 (Addition): "THE WITNESS SAW A WINGED DRAKE"

$37 + 52 = 89$ (T) · $28 + 58 = 86$ (A) · $8 + 14 = 22$ (S) · $21 + 11 = 32$ (R) · $58 + 37 = 95$ (N) · $55 + 24 = 79$ (I) · $15 + 35 = 50$ (G) · $23 + 46 = 69$ (E) · $14 + 27 = 41$ (W) · $20 + 9 = 29$ (K) · $19 + 45 = 64$ (H) · $19 + 25 = 44$ (D)

Clue 3 (Subtraction): "SMELLY CHEESE WILL STOP THIS BEAST"

$67 - 3 = 64$ (S) · $109 - 40 = 69$ (B) · $30 - 19 = 11$ (L) · $83 - 4 = 79$ (Y) · $108 - 20 = 88$ (T) · $56 - 33 = 23$ (M) · $83 - 32 = 51$ (I) · $114 - 31 = 83$ (H) · $47 - 17 = 30$ (O) · $58 - 19 = 39$ (P) · $69 - 19 = 50$ (C) · $55 - 22 = 33$ (E) · $42 - 4 = 38$ (W) · $99 - 18 = 81$ (A)

Clue 4 (Skip counting): "THE TAIL CLUB SMASHED A STONE"

Skip-count by 2s. Fill the blank: 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, 26, __, 30, 32 = 28 (T) · Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, 21, 24, 27, 30, __, 36, 39 = 33 (D) · Skip-count by 2s. Fill the blank: 2, 4, __, 8, 10 = 6 (U) · Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, 60, 70, 80, 90, 100, 110, __, 130, 140 = 120 (M) · Skip-count by 2s. Fill the blank: 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, __, 28, 30 = 26 (C) · Skip-count by 5s. Fill the blank: 5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 55, 60, __, 70, 75 = 65 (I) · Skip-count by 5s. Fill the blank: 5, 10, 15, 20, __, 30, 35 = 25 (H) · Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, 60, 70, 80, 90, 100, 110, 120, 130, __, 150, 160 = 140 (E) · Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, __, 21, 24 = 18 (B) · Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, 21, 24, __, 30, 33 = 27 (L) · Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, 21, 24, 27, 30, 33, __, 39, 42 = 36 (N) · Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, 21, 24, 27, 30, 33, 36, __, 42, 45 = 39 (A) · Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, __, 24, 27 = 21 (O) · Skip-count by 5s. Fill the blank: 5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 55, 60, 65, __, 75, 80 = 70 (S)

Clue 5 (Missing addends): surviving statement is box 6 → Ignis

$3 + \underline{\quad} = 13 = 10$ · $3 + \underline{\quad} = 7 = 4$ · $10 + \underline{\quad} = 13 = 3$ · $1 + \underline{\quad} = 3 = 2$ · $5 + \underline{\quad} = 13 = 8$ · $5 + \underline{\quad} = 17 = 12$ · $9 + \underline{\quad} = 16 = 7$ · $2 + \underline{\quad} = 7 = 5$ · $1 + \underline{\quad} = 2 = 1$ · $6 + \underline{\quad} = 17 = 11$ · $9 + \underline{\quad} = 18 = 9$