The Swamp Potion Mystery

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

Detective: _____ **Date:** _____

Someone splashed green slime all over Marshland Hall and ran off! Detective, help Chief Marsh Ranger Brok figure out which bandit did it before the grand mud festival begins.

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 swamp bandit is _____

Possible suspects

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

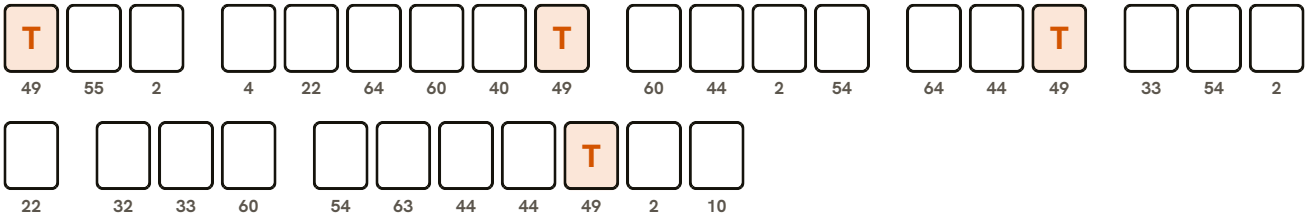
NAME	SWAMP SKILL	MARSH GADGET	DOMINANT HAND	FUR COLOR	DISLIKE
Shrek Simon	Onion Bombing	Mud Scooter	Right Handed	Brown Scruff	Clean Towels
Fiona Fox	Mud Slagging	Swamp Compass	Left Handed	Brown Scruff	Clean Towels
Puss Pierre	Mud Slagging	Mud Scooter	Left Handed	Green Scruff	Sweet Perfume
Ogre Barnaby	Burp Blasting	Earwax Torch	Right Handed	Green Scruff	Clean Towels
Donkey Dale	Bug Snacking	Earwax Torch	Left Handed	Brown Scruff	Clean Towels
Witch Wanda	Onion Bombing	Slug Cannon	Right Handed	Green Scruff	Clean Towels
Boggy Bob	Mud Slagging	Earwax Torch	Left Handed	Brown Scruff	Fresh Soap
Knight Norbert	Bug Snacking	Mud Scooter	Right Handed	Brown Scruff	Fresh Soap
Bear Barnaby	Onion Bombing	Swamp Compass	Right Handed	Grey Scruff	Sweet Perfume
Gargoyle Grom	Onion Bombing	Rotten Shield	Left Handed	Brown Scruff	Sweet Perfume
Fairy Flora	Bug Snacking	Earwax Torch	Right Handed	Grey Scruff	Clean Towels
Troll Tor	Onion Bombing	Swamp Compass	Right Handed	Brown Scruff	Clean Towels
Dragon Greta	Burp Blasting	Swamp Compass	Right Handed	Brown Scruff	Clean Towels
Cookie Carl	Burp Blasting	Rotten Shield	Right Handed	Brown Scruff	Sweet Perfume
Wolf Walter	Onion Bombing	Rotten Shield	Right Handed	Green Scruff	Fresh Soap
Goblin Gus	Mud Slagging	Earwax Torch	Right Handed	Brown Scruff	Clean Towels
Piper Pete	Burp Blasting	Rotten Shield	Right Handed	Brown Scruff	Clean Towels
Gnome Gideon	Mud Slagging	Mud Scooter	Right Handed	Grey Scruff	Sweet Perfume
Mirror Mark	Onion Bombing	Swamp Compass	Left Handed	Grey Scruff	Sweet Perfume
Swamp Sam	Burp Blasting	Mud Scooter	Right Handed	Grey Scruff	Fresh Soap
Prince Percy	Burp Blasting	Rotten Shield	Right Handed	Green Scruff	Clean Towels

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CLUE 1 Multiplication facts (1-12)

You count the rows of smashed pumpkins in the swamp garden to get your first hint.

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



7 × 7 = ☐ → T

9 × 7 = ☐ → C

8 × 8 = ☐ → N

2 × 2 = ☐ → B

9 × 6 = ☐ → S

3 × 11 = ☐ → U

10 × 4 = ☐ → I

11 × 2 = ☐ → A

2 × 1 = ☐ → E

8 × 4 = ☐ → M

1 × 10 = ☐ → R

4 × 11 = ☐ → O

12 × 5 = ☐ → D

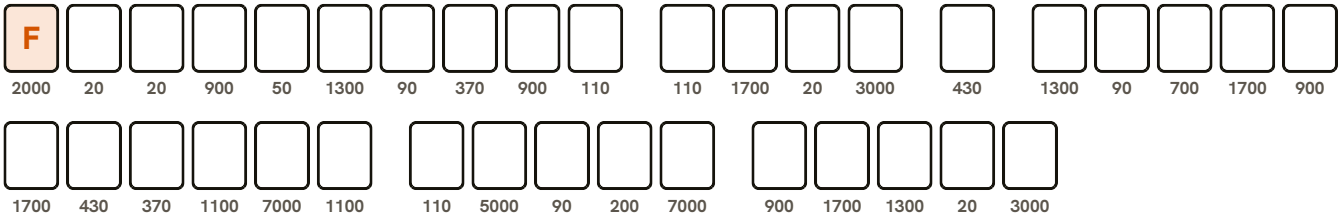
11 × 5 = ☐ → H

Scratch space:

CLUE 2 Rounding

A mud covered signpost gives an approximate distance that points to a clue.

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



Round 1,976 to the nearest thousand ☐ → F

Round 5,131 to the nearest thousand ☐ → L

Round 3,375 to the nearest thousand ☐ → W

Round 52 to the nearest ten ☐ → P

Round 427 to the nearest ten ☐ → A

Round 6,689 to the nearest thousand ☐ → E

Round 668 to the nearest hundred ☐ → G

Round 18 to the nearest ten ☐ → O

Round 1,707 to the nearest hundred ☐ → H

Round 182 to the nearest hundred ☐ → M

Round 88 to the nearest ten ☐ → I

Round 1,290 to the nearest hundred ☐ → R

Round 367 to the nearest ten ☐ → N

Round 108 to the nearest ten ☐ → S

Round 928 to the nearest hundred ☐ → T

Round 1,052 to the nearest hundred ☐ → D

Scratch space:

CLUE 3 Skip counting

Following footsteps in equal jumps across the marsh lily pads reveals the next clue.

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

T																	T						
20	33	21	50	14	18	60	21	50	70	55	14	50	21	130	20	33	21	10					
					T										T								
100	22	22	140	39	20	33	55	15	21	14	18	20	100	140	21	15	70						

Skip-count by 2s. Fill the blank: 2, 4, 6, 8, 10, 12, 14, 16, 18, ___, 22, 24 ☐ → **T**

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

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

Skip-count by 10s. Fill the blank: 10, 20, 30, 40, ___, 60, 70 ☐ → **R**

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

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

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

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

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

Skip-count by 5s. Fill the blank: 5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 55, ___, 65, 70 ☐ → **G**

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

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

Skip-count by 2s. Fill the blank: 2, 4, 6, 8, ___, 12, 14 ☐ → **M**

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

Skip-count by 2s. Fill the blank: 2, 4, 6, 8, 10, 12, ___, 16, 18 ☐ → **A**

Skip-count by 5s. Fill the blank: 5, 10, ___, 20, 25 ☐ → **L**

Scratch space:

CLUE 4 Place value

Digging through marshland logs you find a numbered chest key that exposes the next detail.

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

M				
2000	100	200	600	70

9000	8000	8000	90	600

70	8000	500	90

7000	200	300	9000	800

600	40	200	5000	400	400

What is the value of the 2 in 32,987? ☐ → **M**

What is the value of the 8 in 8,342? ☐ → **E**

What is the value of the 6 in 655? ☐ → **S**

What is the value of the 2 in 1,217? ☐ → **R**

What is the value of the 4 in 6,415? ☐ → **F**

What is the value of the 9 in 594? ☐ → **D**

What is the value of the 9 in 39,805? ☐ → **W**

What is the value of the 5 in 95,663? ☐ → **U**

What is the value of the 7 in 37,112? ☐ → **B**

What is the value of the 4 in 2,749? ☐ → **C**

What is the value of the 8 in 829? ☐ → **N**

What is the value of the 3 in 357? ☐ → **O**

What is the value of the 1 in 6,159? ☐ → **A**

What is the value of the 5 in 1,500? ☐ → **L**

What is the value of the 7 in 4,072? ☐ → **H**

Scratch space:

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

> Dividing swamp berries equally among the witnesses calms them down so they reveal the last piece.

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:

30 ÷ 5 = ☐	6 ÷ 3 = ☐	11 ÷ 11 = ☐	9 ÷ 3 = ☐	40 ÷ 5 = ☐
9 ÷ 1 = ☐	10 ÷ 2 = ☐	99 ÷ 9 = ☐	36 ÷ 3 = ☐	12 ÷ 3 = ☐
20 ÷ 2 = ☐				

Step 2 - cross out the sentence with each answer:

1. The villain tossed onion bombs everywhere, then checked a swamp compass.
2. The villain let out a mighty burp, then checked a swamp compass.
3. The villain splashed mud across the floor, then fired a slug cannon.
4. The villain slid down the muddy bank, then checked a swamp compass.
5. The villain slid down the muddy bank, then hid behind a rotten shield.
6. The villain splashed mud across the floor, then lit the way with an earwax torch.
7. The villain let out a mighty burp, then hid behind a rotten shield.
8. The villain tossed onion bombs everywhere, then zoomed away on a mud scooter.
9. The villain splashed mud across the floor, then checked a swamp compass.
10. The villain slid down the muddy bank, then zoomed away on a mud scooter.
11. The villain splashed mud across the floor, then zoomed away on a mud scooter.
12. The villain munched on crunchy swamp beetles, then hid behind a rotten shield.

TEACHER / PARENT

Answer Key

The Swamp Potion Mystery

Culprit: Piper Pete

Burp Blasting · Rotten Shield · Right Handed · Brown Scruff · Clean Towels

Trail: Start 21 → Clue 1 16 → Clue 2 11 → Clue 3 8 → Clue 4 4 → Clue 5 1

Clue 1 (Multiplication facts (1-12)): "THE BANDIT DOES NOT USE A MUD SCOOTER"

7 × 7 = 49 (T) · 9 × 7 = 63 (C) · 8 × 8 = 64 (N) · 2 × 2 = 4 (B) · 9 × 6 = 54 (S) · 3 × 11 = 33 (U) · 10 × 4 = 40 (I) · 11 × 2 = 22 (A) · 2 × 1 = 2 (E) · 8 × 4 = 32 (M) · 1 × 10 = 10 (R) · 4 × 11 = 44 (O) · 12 × 5 = 60 (D) · 11 × 5 = 55 (H)

Clue 2 (Rounding): "FOOTPRINTS SHOW A RIGHT HANDED SLIME THROW"

Round 1,976 to the nearest thousand = 2000 (F) · Round 5,131 to the nearest thousand = 5000 (L) · Round 3,375 to the nearest thousand = 3000 (W) · Round 52 to the nearest ten = 50 (P) · Round 427 to the nearest ten = 430 (A) · Round 6,689 to the nearest thousand = 7000 (E) · Round 668 to the nearest hundred = 700 (G) · Round 18 to the nearest ten = 20 (O) · Round 1,707 to the nearest hundred = 1700 (H) · Round 182 to the nearest hundred = 200 (M) · Round 88 to the nearest ten = 90 (I) · Round 1,290 to the nearest hundred = 1300 (R) · Round 367 to the nearest ten = 370 (N) · Round 108 to the nearest ten = 110 (S) · Round 928 to the nearest hundred = 900 (T) · Round 1,052 to the nearest hundred = 1100 (D)

Clue 3 (Skip counting): "THE RANGER SCARED THEM OFF WITH CLEAN TOWELS"

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

Clue 4 (Place value): "MARSH WEEDS HELD BROWN SCRUFF"

What is the value of the 2 in 32,987? = 2000 (M) · What is the value of the 8 in 8,342? = 8000 (E) · What is the value of the 6 in 655? = 600 (S) · What is the value of the 2 in 1,217? = 200 (R) · What is the value of the 4 in 6,415? = 400 (F) · What is the value of the 9 in 594? = 90 (D) · What is the value of the 9 in 39,805? = 9000 (W) · What is the value of the 5 in 95,663? = 5000 (U) · What is the value of the 7 in 37,112? = 7000 (B) · What is the value of the 4 in 2,749? = 40 (C) · What is the value of the 8 in 829? = 800 (N) · What is the value of the 3 in 357? = 300 (O) · What is the value of the 1 in 6,159? = 100 (A) · What is the value of the 5 in 1,500? = 500 (L) · What is the value of the 7 in 4,072? = 70 (H)

Clue 5 (Division facts (1-12)): surviving statement is box 7 → Piper Pete

30 ÷ 5 = 6 · 6 ÷ 3 = 2 · 11 ÷ 11 = 1 · 9 ÷ 3 = 3 · 40 ÷ 5 = 8 · 9 ÷ 1 = 9 · 10 ÷ 2 = 5 · 99 ÷ 9 = 11 · 36 ÷ 3 = 12 · 12 ÷ 3 = 4 · 20 ÷ 2 = 10