

The Great Fall Festival Heist

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

Detective: _____ Date: _____

Someone swiped the legendary Golden Acorn right from the Apple Hill Cider Mill! Without it, the autumn festival cannot begin. The Head Cider Maker needs your help to track down the sneaky thief before the leaves all drop!

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 Golden Acorn Thief is _____

Possible suspects

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

NAME	HARVEST SKILL	FESTIVAL TOOL	HOLDING STYLE	LEAF CROWN COLOR	DISTRACTION
Barnaby	pie baking	copper lantern	left handed grip	orange oak leaf	warm apple cider
Rusty	pie baking	wooden ladle	right handed grip	yellow birch leaf	warm apple cider
Jasper	pie baking	silver rake	right handed grip	red maple leaf	hot pumpkin spice
Wendell	pumpkin carving	golden shears	right handed grip	orange oak leaf	hot pumpkin spice
Maisie	apple bobbing	copper lantern	right handed grip	red maple leaf	warm apple cider
Rowan	pie baking	bronze bucket	right handed grip	yellow birch leaf	warm apple cider
Hazel	pie baking	copper lantern	right handed grip	orange oak leaf	warm apple cider
Autumn	apple bobbing	wooden ladle	left handed grip	red maple leaf	hot pumpkin spice
Gideon	apple bobbing	golden shears	right handed grip	red maple leaf	warm apple cider
Beatrix	corn maze building	golden shears	left handed grip	orange oak leaf	warm apple cider
Orla	hayride driving	silver rake	left handed grip	red maple leaf	hot pumpkin spice
Daphne	hayride driving	wooden ladle	left handed grip	yellow birch leaf	hot pumpkin spice
Caleb	corn maze building	bronze bucket	right handed grip	red maple leaf	sweet cinnamon buns
Hunter	apple bobbing	golden shears	right handed grip	red maple leaf	hot pumpkin spice
Ginger	pumpkin carving	golden shears	left handed grip	red maple leaf	hot pumpkin spice
Gourd	apple bobbing	copper lantern	right handed grip	red maple leaf	hot pumpkin spice
Leif	pumpkin carving	copper lantern	right handed grip	red maple leaf	hot pumpkin spice
Sawyer	corn maze building	bronze bucket	right handed grip	yellow birch leaf	warm apple cider
Tabitha	corn maze building	bronze bucket	right handed grip	yellow birch leaf	hot pumpkin spice
Willow	corn maze building	golden shears	right handed grip	red maple leaf	sweet cinnamon buns
Piper	corn maze building	wooden ladle	right handed grip	red maple leaf	hot pumpkin spice

CLUE 1

Subtraction

We count the apples in the bin and subtract the ones that rolled away to find our first hint.

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

T 690	576	281	T 690	576	215	281	617	116	264	281	348	593	264	T 690	861	348	281
T 690	576	281	398	264	264	116	281	593	257	807	116	257	281				

$722 - 32 = \square \rightarrow \boxed{\text{T}}$

$846 - 39 = \square \rightarrow \boxed{\text{A}}$

$791 - 174 = \square \rightarrow \boxed{\text{F}}$

$761 - 168 = \square \rightarrow \boxed{\text{N}}$

$523 - 175 = \square \rightarrow \boxed{\text{S}}$

$929 - 68 = \square \rightarrow \boxed{\text{U}}$

$394 - 137 = \square \rightarrow \boxed{\text{L}}$

$847 - 271 = \square \rightarrow \boxed{\text{H}}$

$456 - 58 = \square \rightarrow \boxed{\text{W}}$

$333 - 118 = \square \rightarrow \boxed{\text{I}}$

$387 - 271 = \square \rightarrow \boxed{\text{D}}$

$487 - 206 = \square \rightarrow \boxed{\text{E}}$

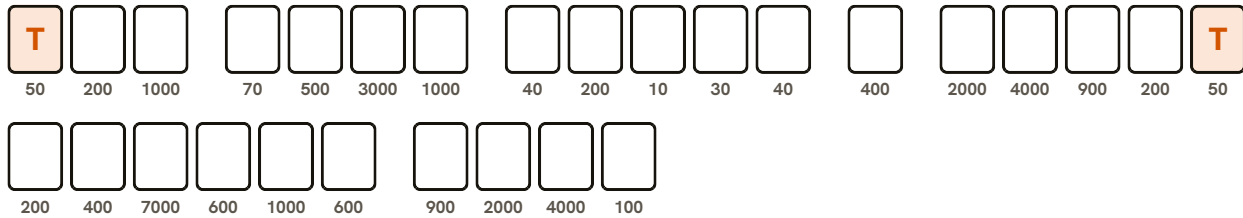
$417 - 153 = \square \rightarrow \boxed{\text{O}}$

Scratch space:

CLUE 2 Place value

The locker has a three digit code so we look at the tens and ones place value blocks to open it.

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



What is the value of the 5 in 7,152? → **T**

What is the value of the 3 in 1,936? → **W**

What is the value of the 2 in 9,255? → **H**

What is the value of the 1 in 123? → **P**

What is the value of the 9 in 988? → **G**

What is the value of the 1 in 1,043? → **E**

What is the value of the 3 in 83,061? → **U**

What is the value of the 6 in 681? → **D**

What is the value of the 5 in 524? → **L**

What is the value of the 4 in 4,735? → **I**

What is the value of the 4 in 9,490? → **A**

What is the value of the 1 in 3,815? → **O**

What is the value of the 7 in 97,908? → **N**

What is the value of the 2 in 2,088? → **R**

What is the value of the 4 in 5,948? → **S**

What is the value of the 7 in 278? → **C**

Scratch space:

CLUE 3

We add up all the pumpkins found in the north patch and south patch to get the next clue.

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

[illegible]

$268 + 514 = \boxed{} \rightarrow \boxed{\text{T}}$

$$281 + 389 = \boxed{} \rightarrow \boxed{\text{U}}$$

$312 + 192 = \boxed{} \rightarrow \boxed{\text{M}}$

$390 + 493 = \boxed{} \rightarrow \boxed{\text{N}}$

$$270 + 621 = \boxed{} \rightarrow \boxed{\text{H}}$$

$$239 + 552 = \boxed{} \rightarrow \boxed{\text{S}}$$

$278 + 154 = \boxed{} \rightarrow \boxed{\text{I}}$

$$242 + 289 = \boxed{} \rightarrow \boxed{\text{A}}$$

$$229 + 204 = \boxed{} \rightarrow \boxed{\text{C}}$$

$510 + 246 = \boxed{} \rightarrow \boxed{\text{D}}$

$467 + 488 = \boxed{} \rightarrow \boxed{\text{K}}$

$$226 + 118 = \boxed{} \rightarrow \boxed{\text{R}}$$

$437 + 475 = \boxed{} \rightarrow \boxed{\text{E}}$

$$338 + 301 = \boxed{} \rightarrow \boxed{\text{P}}$$

$$84 + 190 = \boxed{} \rightarrow \boxed{0}$$

Scratch space:

CLUE 4 Rounding

The rusty orchard scale only rounds weights to the nearest ten giving us a fast estimate.

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

W															
90	2000	900	9000	700	800	3000	300	7000	2000	3000	8000	300	60	600	2000

600	2000	300	900	300	20	20	400	2000	5000	200	2000	800	2000

Round 89 to the nearest ten → **W**

Round 4,588 to the nearest thousand → **S**

Round 2,785 to the nearest thousand → **D**

Round 8,613 to the nearest thousand → **O**

Round 745 to the nearest hundred → **U**

Round 8,226 to the nearest thousand → **M**

Round 2,153 to the nearest thousand → **E**

Round 429 to the nearest hundred → **H**

Round 580 to the nearest hundred → **L**

Round 7,156 to the nearest thousand → **R**

Round 318 to the nearest hundred → **A**

Round 63 to the nearest ten → **P**

Round 154 to the nearest hundred → **C**

Round 23 to the nearest ten → **T**

Round 943 to the nearest hundred → **F**

Round 809 to the nearest hundred → **N**

Scratch space:

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

We divide a bag of sunflower seeds equally among the forest helpers to reveal the last secret.

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:

$5 \div 5 = \boxed{}$

$90 \div 10 = \boxed{}$

$25 \div 5 = \boxed{}$

$7 \div 1 = \boxed{}$

$24 \div 4 = \boxed{}$

$24 \div 12 = \boxed{}$

$144 \div 12 = \boxed{}$

$66 \div 6 = \boxed{}$

$3 \div 1 = \boxed{}$

$80 \div 8 = \boxed{}$

$44 \div 11 = \boxed{}$

Step 2 - cross out the sentence with each answer:

1. The villain carves a spooky pumpkin face, then lights up the dark with a copper lantern.
2. The villain steers the noisy hayride tractor, then scoops up cool water in a bronze bucket.
3. The villain carves a spooky pumpkin face, then snips the vines with golden shears.
4. The villain bakes a giant flaky apple pie, then snips the vines with golden shears.
5. The villain bobs for three apples at once, then lights up the dark with a copper lantern.
6. The villain creates a tricky corn maze path, then snips the vines with golden shears.
7. The villain carves a spooky pumpkin face, then sweeps the path with a silver rake.
8. The villain bobs for three apples at once, then snips the vines with golden shears.
9. The villain bakes a giant flaky apple pie, then sweeps the path with a silver rake.
10. The villain bobs for three apples at once, then sweeps the path with a silver rake.
11. The villain steers the noisy hayride tractor, then snips the vines with golden shears.
12. The villain bakes a giant flaky apple pie, then lights up the dark with a copper lantern.

Answer Key

The Great Fall Festival Heist

Culprit: Hunter

apple bobbing · golden shears · right handed grip · red maple leaf · hot pumpkin spice

Trail: Start 21 → Clue 1 17 → Clue 2 13 → Clue 3 6 → Clue 4 4 → Clue 5 1

Clue 1 (Subtraction): "THE THIEF DOES NOT USE THE WOODEN LADLE"

$722 - 32 = 690$ (T) · $846 - 39 = 807$ (A) · $791 - 174 = 617$ (F) · $761 - 168 = 593$ (N) · $523 - 175 = 348$ (S) · $929 - 68 = 861$ (U) · $394 - 137 = 257$ (L) · $847 - 271 = 576$ (H) · $456 - 58 = 398$ (W) · $333 - 118 = 215$ (I) · $387 - 271 = 116$ (D) · $487 - 206 = 281$ (E) · $417 - 153 = 264$ (O)

Clue 2 (Place value): "THE CLUE SHOWS A RIGHT HANDED GRIP"

What is the value of the 5 in 7,152? = 50 (T) · What is the value of the 3 in 1,936? = 30 (W) · What is the value of the 2 in 9,255? = 200 (H) · What is the value of the 1 in 123? = 100 (P) · What is the value of the 9 in 988? = 900 (G) · What is the value of the 1 in 1,043? = 1000 (E) · What is the value of the 3 in 83,061? = 3000 (U) · What is the value of the 6 in 681? = 600 (D) · What is the value of the 5 in 524? = 500 (L) · What is the value of the 4 in 4,735? = 4000 (I) · What is the value of the 4 in 9,490? = 400 (A) · What is the value of the 1 in 3,815? = 10 (O) · What is the value of the 7 in 97,908? = 7000 (N) · What is the value of the 2 in 2,088? = 2000 (R) · What is the value of the 4 in 5,948? = 40 (S) · What is the value of the 7 in 278? = 70 (C)

Clue 3 (Addition): "THE SNEAK DROPPED A HOT PUMPKIN SPICE CUP"

$268 + 514 = 782$ (T) · $281 + 389 = 670$ (U) · $312 + 192 = 504$ (M) · $390 + 493 = 883$ (N) · $270 + 621 = 891$ (H) · $239 + 552 = 791$ (S) · $278 + 154 = 432$ (I) · $242 + 289 = 531$ (A) · $229 + 204 = 433$ (C) · $510 + 246 = 756$ (D) · $467 + 488 = 955$ (K) · $226 + 118 = 344$ (R) · $437 + 475 = 912$ (E) · $338 + 301 = 639$ (P) · $84 + 190 = 274$ (O)

Clue 4 (Rounding): "WE FOUND A RED MAPLE LEAF AT THE SCENE"

Round 89 to the nearest ten = 90 (W) · Round 4,588 to the nearest thousand = 5000 (S) · Round 2,785 to the nearest thousand = 3000 (D) · Round 8,613 to the nearest thousand = 9000 (O) · Round 745 to the nearest hundred = 700 (U) · Round 8,226 to the nearest thousand = 8000 (M) · Round 2,153 to the nearest thousand = 2000 (E) · Round 429 to the nearest hundred = 400 (H) · Round 580 to the nearest hundred = 600 (L) · Round 7,156 to the nearest thousand = 7000 (R) · Round 318 to the nearest hundred = 300 (A) · Round 63 to the nearest ten = 60 (P) · Round 154 to the nearest hundred = 200 (C) · Round 23 to the nearest ten = 20 (T) · Round 943 to the nearest hundred = 900 (F) · Round 809 to the nearest hundred = 800 (N)

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

$5 \div 5 = 1$ · $90 \div 10 = 9$ · $25 \div 5 = 5$ · $7 \div 1 = 7$ · $24 \div 4 = 6$ · $24 \div 12 = 2$ · $144 \div 12 = 12$ · $66 \div 6 = 11$ · $3 \div 1 = 3$ · $80 \div 8 = 10$ · $44 \div 11 = 4$