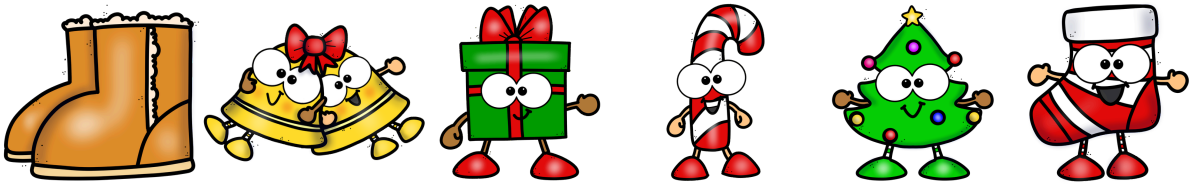
CHRISTMAS MATH MYSTERY

WHO STOLE THE SLEIGH?



GRADES 3-4

Christmas Math Mystery: Start Here



The story

The sleigh has vanished from the workshop. Students read the case sheet (page 3), meet 6 suspects (page 4), and solve 5 clues. Each clue page has four problems. Exactly **one** answer matches a suspect's secret number. That clears the suspect and gives a letter. The 5 letters, in clue order, spell where the sleigh is, and the one suspect left is who moved it. Each suspect is a job (Cookie Baker, Bell Ringer and so on) shown with a small picture.

What's inside

- **The case**: a case sheet (page 3) and a suspect board with a tick box for each suspect (page 4).
- **5 clue pages** (pages 5-9): addition with regrouping, subtraction with regrouping, multiplication, division and two-step word problems. Four problems each, with a work space and an answer line for every one.
- **Solve the case** (page 10) and a **case report** (page 11).
- **Math tools** (page 12): four worked models and a tip for two-step problems.
- **Review on three levels** (pages 13-15): circle is one step, square is two steps, triangle is three steps. 16 problems in all.
- **Make my own clue** (page 16) and a **self-check** with a Case Closed badge (page 17).
- **For adults**: a filled example by an invented student (page 18), the answer key (pages 19-20), a family letter (page 21) and credits (page 22).

How to run it

Hand out pages 3-4 first. Then give one clue page at a time, in order. A student who gets no match has made an error: the other three answers are practice, and the key (page 19) shows each one. Students cross off the suspect on the clue page and tick it on the board.

A five-day plan

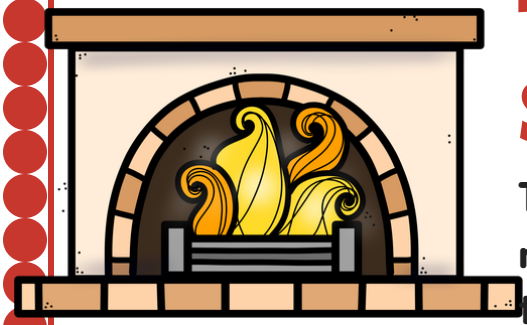
- **Day 1**: case sheet and suspect board, then clue 1. **Day 2**: clues 2 and 3. **Day 3**: clues 4 and 5.
- **Day 4**: solve the case, write the case report. **Day 5**: a review page for each child's level, then the self-check.

The problems use numbers up to four digits. You need pencils and crayons. Print single-sided; nothing is cut. The story is made up.

PREVIEW

My name _____

Read the case. Tick each clue you find.



The Case of the Missing Sleigh

The sleigh is gone from the workshop! Somebody moved it. We have five clues and six suspects. Solve the clues to find who and where.

The five clues

☐ 
Boot prints
in the snow

☐ 
A bell
by the stable

☐ 
A red ribbon
on the shed

☐ 
A sack
by the gate

☐ 
Runner marks
in the snow

My detective notes

What is missing? _____

Where was it last seen? _____

I think it was the _____

because _____

PREVIEW

My name _____

Solve. Find the answer that matches a suspect.



Clue 1: Boot Prints

Big boot prints lead out of the workshop door. Add to find out who they are NOT.

Suspects. Cross off the one you clear.

Cookie Baker	Bell Ringer	Snow Shoveler	Toy Packer	Gift Wrapper	Tree Trimmer
86	825	1,206	78	1,735	476
letter N	letter C	letter S	letter I	letter A	letter B

A 347 + 285

Answer _____

B 458 + 367

Answer _____

C 276 + 489

Answer _____

D 519 + 346

Answer _____

The match is _____ I cross off _____ My letter _____

PREVIEW

My name _____

Solve. Find the answer that matches a suspect.



Clue 3: The Red Ribbon

A red ribbon from a gift was caught on the sleigh shed. Multiply to find who it is NOT.

Suspects. Cross off the one you clear.

Cookie Baker	Bell Ringer	Snow Shoveler	Toy Packer	Gift Wrapper	Tree Trimmer
86	825	1,206	78	1,735	476
letter N	letter C	letter S	letter I	letter A	letter B

A 68 × 7

Answer _____

B 45 × 8

Answer _____

C 237 × 4

Answer _____

D 56 × 9

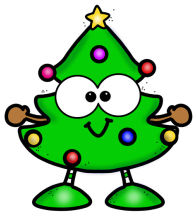
Answer _____

The match is _____ I cross off _____ My letter _____

PREVIEW

My name _____

Solve. Find the answer that matches a suspect.



Clue 5: Runner Marks

Two long marks in the snow lead away from the workshop. Read, then solve in two steps.

Suspects. Cross off the one you clear.

Cookie Baker	Bell Ringer	Snow Shoveler	Toy Packer	Gift Wrapper	Tree Trimmer
86	825	1,206	78	1,735	476
letter N	letter C	letter S	letter I	letter A	letter B

A A shop packs 6 bells in each box. It packs 7 boxes. Then it packs 15 loose bells. How many bells is that?

Answer _____

B A shelf has 9 rows of 12 candy canes. 22 candy canes are broken. How many are not broken?

Answer _____

C There are 125 ornaments. 48 are red and 37 are gold. The rest are blue. How many are blue?

Answer _____

D Each stocking holds 8 cookies. 5 stockings are filled. Then 19 cookies are eaten. How many cookies are left?

Answer _____

The match is _____ **I cross off** _____ **My letter** _____

PREVIEW

My name _____

Write your case report.

The Case of the Missing Sleigh

First Tell what was missing.

Next Tell how you used the clues.

Then Tell who moved it and where.

Last Tell how you know.

Use math words: add, subtract, multiply, divide, total, left.

PREVIEW

My name _____

Read. Solve in two steps.

1 A box holds 8 bells. 6 boxes are full. 9 more bells are loose. How many bells in all?

Answer _____

2 A tree has 4 rows of 12 lights. 17 lights go out. How many lights still glow?

Answer _____

3 There are 150 candy canes. 65 go in a sack. 48 go in a box. How many are left?

Answer _____

4 Each stocking has 7 cookies. There are 9 stockings. 14 cookies fall on the floor. How many are still in stockings?

Answer _____

5 A shop has 234 gifts. It sells 98 gifts. Then 125 more come in. How many gifts does it have now?

Answer _____

6 A box has 48 ribbons. They go into 6 equal piles. 3 piles are used. How many ribbons are used?

Answer _____

PREVIEW

My name _____

Make a new clue for the case.

My clue is a

☐ boot ☐ bell ☐ ribbon ☐ sack ☐ mark

My math story

Draw my clue

I solve it here

My answer is _____

PREVIEW

EXAMPLE: clue 1 filled in by Sam, an invented student. Not a real child.

My name Sam

Solve. Find the answer that matches a suspect.



Clue 1: Boot Prints

Big boot prints lead out of the workshop door. Add to find out who they are NOT.

Suspects. Cross off the one you clear.

Cookie Baker	~~Bell Ringer~~	Snow Shoveler	Toy Packer	Gift Wrapper	Tree Trimmer
86	~~825~~	1,206	78	1,735	476
letter N	~~letter C~~	letter S	letter I	letter A	letter B

A 347 + 285

Answer 632

B 458 + 367

458
+ 367
825

Answer 825

C 276 + 489

Answer 765

D 519 + 346

Answer 865

The match is B **I cross off** Bell Ringer **My letter** C

PREVIEW

Answer Key: Review and Models

Circle, one step (page 13)

No.	Answer
1	364 + 278 = 642
2	705 − 348 = 357
3	47 × 6 = 282
4	96 ÷ 8 = 12
5	1,248 + 3,175 = 4,423
6	2,000 − 856 = 1,144

Square, two steps (page 14)

No.	Steps and answer, the answer is the last number
1	8 × 6 = 48, then 48 + 9 = 57
2	4 × 12 = 48, then 48 − 17 = 31
3	65 + 48 = 113, then 150 − 113 = 37
4	7 × 9 = 63, then 63 − 14 = 49
5	234 − 98 = 136, then 136 + 125 = 261
6	48 ÷ 6 = 8, then 8 × 3 = 24

Triangle, three steps (page 15)

No.	Steps and answer, the answer is the last number
1	125 × 4 = 500; 500 − 275 = 225; 225 ÷ 5 = 45
2	6 × 38 = 228; 228 − 87 = 141; 141 ÷ 3 = 47
3	3 + 4 = 7; 7 × 9 = 63; 63 − 18 = 45
4	3 × 285 = 855; 1,500 − 855 = 645; 645 + 120 = 765

Math tools models (page 12)

276 + 158 = 434; 3,465 − 1,238 = 2,227; 34 × 6 = 204; 84 ÷ 7 = 12. These are different numbers from the clues.

The filled example (page 18)

Sam is an invented student. On clue 1 the answers are 632, 825, 765, 865. Only B, 825, matches a suspect (the Bell Ringer), so Sam crossed off the Bell Ringer and wrote the letter C.

PREVIEW