



# The Case of the Prism Academy Heist

Grade 5 math · Multiplication, Fractions of a number, Order of operations, Rounding, Division · Reading level grades 5-6

Detective: \_\_\_\_\_ Date: \_\_\_\_\_

The legendary Crystal Horn has been stolen from the Prism Academy! A rogue unicorn has used forbidden magic to swipe the horn, leaving a trail of shimmering hoofprints. It is up to our young detective to track down the thief before the Valley loses its sparkle forever.

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 Unicorn is** \_\_\_\_\_

## Possible suspects

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

| NAME       | UNICORN MAGIC         | ENCHANTED GEAR       | WRITING STYLE       | MANE STYLE        | VULNERABILITY        |
|------------|-----------------------|----------------------|---------------------|-------------------|----------------------|
| Amethyst   | frost breeze sparks   | glowing aura tiara   | right-hoofed writer | neon pink braids  | clanging brass bells |
| Topaz      | storm cloud conjuring | pegasus speed saddle | right-hoofed writer | pastel blue curls | sour green apples    |
| Opal       | frost breeze sparks   | golden wing boots    | left-hoofed writer  | bright gold waves | sour green apples    |
| Diamond    | storm cloud conjuring | pegasus speed saddle | left-hoofed writer  | pastel blue curls | sour green apples    |
| Glimmer    | frost breeze sparks   | golden wing boots    | right-hoofed writer | bright gold waves | clanging brass bells |
| Sapphire   | rainbow blast beam    | telepathic headpiece | right-hoofed writer | pastel blue curls | shiny silver mirrors |
| Starflight | crystal shield magic  | golden wing boots    | left-hoofed writer  | pastel blue curls | clanging brass bells |
| Ruby       | storm cloud conjuring | glitter dust cloak   | left-hoofed writer  | pastel blue curls | sour green apples    |
| Beryl      | storm cloud conjuring | telepathic headpiece | right-hoofed writer | bright gold waves | sour green apples    |
| Pearl      | frost breeze sparks   | golden wing boots    | right-hoofed writer | pastel blue curls | clanging brass bells |
| Peridot    | storm cloud conjuring | golden wing boots    | left-hoofed writer  | neon pink braids  | shiny silver mirrors |
| Luna       | crystal shield magic  | glowing aura tiara   | right-hoofed writer | pastel blue curls | clanging brass bells |
| Twilight   | rainbow blast beam    | golden wing boots    | left-hoofed writer  | neon pink braids  | clanging brass bells |
| Cadance    | frost breeze sparks   | pegasus speed saddle | left-hoofed writer  | pastel blue curls | sour green apples    |
| Amber      | crystal shield magic  | glitter dust cloak   | left-hoofed writer  | pastel blue curls | shiny silver mirrors |
| Starlight  | star portal creation  | golden wing boots    | right-hoofed writer | neon pink braids  | shiny silver mirrors |
| Quartz     | star portal creation  | glitter dust cloak   | left-hoofed writer  | pastel blue curls | sour green apples    |
| Jasper     | star portal creation  | glitter dust cloak   | right-hoofed writer | bright gold waves | shiny silver mirrors |
| Emerald    | star portal creation  | telepathic headpiece | left-hoofed writer  | pastel blue curls | sour green apples    |
| Onyx       | frost breeze sparks   | glowing aura tiara   | left-hoofed writer  | bright gold waves | clanging brass bells |
| Sunburst   | storm cloud conjuring | telepathic headpiece | right-hoofed writer | bright gold waves | clanging brass bells |

**CLUE 1**
**Multiplication facts (1-12)**

To find the first clue, we must count the magical star crystals. They are arranged in equal rows on the academy altar, waiting to be multiplied.

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

|    |    |     |    |     |     |     |    |     |    |     |    |     |    |     |     |    |     |     |     |  |
|----|----|-----|----|-----|-----|-----|----|-----|----|-----|----|-----|----|-----|-----|----|-----|-----|-----|--|
| T  |    |     | T  |     |     |     |    |     |    |     |    |     |    |     |     |    |     |     |     |  |
| 90 | 40 | 120 | 90 | 40  | 25  | 120 | 96 | 100 | 3  | 120 | 35 | 21  | 3  | 90  | 40  | 45 | 7   | 120 |     |  |
|    | T  |     |    |     |     |     | T  |     |    |     |    |     |    |     |     |    |     |     |     |  |
| 45 | 90 | 120 | 36 | 120 | 110 | 45  | 90 | 40  | 25 | 33  | 40 | 120 | 45 | 100 | 110 | 25 | 120 | 33  | 120 |  |

|                                        |                                        |                                        |
|----------------------------------------|----------------------------------------|----------------------------------------|
| $10 \times 9 = \square \rightarrow$ T  | $8 \times 5 = \square \rightarrow$ H   | $5 \times 9 = \square \rightarrow$ A   |
| $10 \times 10 = \square \rightarrow$ D | $3 \times 1 = \square \rightarrow$ O   | $3 \times 11 = \square \rightarrow$ C  |
| $7 \times 1 = \square \rightarrow$ V   | $7 \times 5 = \square \rightarrow$ S   | $11 \times 10 = \square \rightarrow$ P |
| $5 \times 5 = \square \rightarrow$ I   | $10 \times 12 = \square \rightarrow$ E | $3 \times 7 = \square \rightarrow$ N   |
| $9 \times 4 = \square \rightarrow$ L   | $12 \times 8 = \square \rightarrow$ F  |                                        |

Scratch space:

**CLUE 2**
**Fractions of a number**

The next clue is hidden inside the treasure chest. We must calculate a fraction of the total glittering gems to unlock the keyhole.

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

|    |    |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |  |   |
|----|----|----|----|----|----|----|----|----|----|----|----|---|----|----|----|----|----|--|---|
| T  |    |    |    |    |    |    |    |    |    | T  |    |   |    |    |    |    |    |  |   |
| 12 | 28 | 26 | 39 | 37 | 39 | 29 | 26 | 3  | 12 | 31 | 11 | 4 | 12 | 26 | 39 |    |    |  |   |
|    |    |    |    |    |    |    |    | T  |    | T  |    |   |    |    |    |    |    |  | T |
| 3  | 25 | 7  | 26 | 39 | 31 | 4  | 12 | 28 | 12 | 28 | 26 | 4 | 11 | 33 | 26 | 40 | 12 |  |   |
|    |    |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |  |   |
| 28 | 25 | 25 | 40 |    |    |    |    |    |    |    |    |   |    |    |    |    |    |  |   |

$2/4 \text{ of } 24 = \square \rightarrow \boxed{\text{T}}$

$5/10 \text{ of } 80 = \square \rightarrow \boxed{\text{F}}$

$1/2 \text{ of } 14 = \square \rightarrow \boxed{\text{D}}$

$3/10 \text{ of } 130 = \square \rightarrow \boxed{\text{S}}$

$1/6 \text{ of } 66 = \square \rightarrow \boxed{\text{R}}$

$1/4 \text{ of } 12 = \square \rightarrow \boxed{\text{C}}$

$2/6 \text{ of } 87 = \square \rightarrow \boxed{\text{P}}$

$2/4 \text{ of } 66 = \square \rightarrow \boxed{\text{L}}$

$2/10 \text{ of } 185 = \square \rightarrow \boxed{\text{U}}$

$3/6 \text{ of } 56 = \square \rightarrow \boxed{\text{H}}$

$2/8 \text{ of } 100 = \square \rightarrow \boxed{\text{O}}$

$4/8 \text{ of } 62 = \square \rightarrow \boxed{\text{W}}$

$4/8 \text{ of } 8 = \square \rightarrow \boxed{\text{I}}$

$2/10 \text{ of } 130 = \square \rightarrow \boxed{\text{E}}$

Scratch space:

**CLUE 3**
**Order of operations**

Our path is blocked by a magic potion lock. We have to solve the multi-step recipe using the correct order of operations to open the secret door.

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

|          |    |    |          |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
|----------|----|----|----------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| <b>T</b> |    |    | <b>T</b> |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| 45       | 70 | 76 | 45       | 70 | 23 | 76 | 74 | 41 | 12 | 40 | 74 | 41 | 32 | 44 | 24 | 32 | 26 | 41 |
|          |    |    |          |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| 75       | 41 | 76 | 76       | 40 | 12 | 65 | 65 | 66 | 76 | 24 |    |    |    |    |    |    |    |    |

$11 \times 6 - 21 = \square \rightarrow \text{[T]}$

$16 + 2 \times 8 = \square \rightarrow \text{[O]}$

$28 + 2 \times 8 = \square \rightarrow \text{[M]}$

$11 \times 8 - 18 = \square \rightarrow \text{[H]}$

$5 \times 10 - 9 = \square \rightarrow \text{[R]}$

$11 \times 9 - 25 = \square \rightarrow \text{[F]}$

$62 + 2 \times 2 = \square \rightarrow \text{[L]}$

$9 \times 10 - 25 = \square \rightarrow \text{[P]}$

$6 \times 4 - 12 = \square \rightarrow \text{[A]}$

$56 + 4 \times 5 = \square \rightarrow \text{[E]}$

$12 + 2 \times 6 = \square \rightarrow \text{[S]}$

$7 + 2 \times 8 = \square \rightarrow \text{[I]}$

$28 + 2 \times 6 = \square \rightarrow \text{[N]}$

$11 \times 8 - 13 = \square \rightarrow \text{[G]}$

$8 + 9 \times 2 = \square \rightarrow \text{[U]}$

Scratch space:

**CLUE 4 Rounding**

A pressure pad demands a weight check, but the old stone dial only displays values rounded to the nearest ten.  
Round the weight to proceed!

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

|          |     |      |      |     |      |     |     |      |     |     |      |     |     |     |     |     |
|----------|-----|------|------|-----|------|-----|-----|------|-----|-----|------|-----|-----|-----|-----|-----|
| <b>W</b> |     |      |      |     |      |     |     |      |     |     |      |     |     |     |     |     |
| 50       | 200 | 3000 | 9000 | 700 | 90   | 130 | 170 | 7000 | 300 | 290 | 200  | 30  | 500 | 30  | 700 | 200 |
|          |     |      |      |     |      |     |     |      |     |     |      |     |     |     |     |     |
| 1300     | 700 | 370  | 30   | 300 | 7000 | 290 | 290 | 70   | 200 | 300 | 1300 | 200 | 90  | 200 |     |     |

Round 46 to the nearest ten  → **W**

Round 369 to the nearest ten  → **R**

Round 168 to the nearest ten  → **P**

Round 1,310 to the nearest hundred  → **C**

Round 32 to the nearest ten  → **L**

Round 462 to the nearest hundred  → **B**

Round 291 to the nearest hundred  → **S**

Round 88 to the nearest ten  → **N**

Round 126 to the nearest ten  → **D**

Round 71 to the nearest ten  → **H**

Round 723 to the nearest hundred  → **U**

Round 288 to the nearest ten  → **T**

Round 247 to the nearest hundred  → **E**

Round 6,881 to the nearest thousand  → **A**

Round 3,463 to the nearest thousand  → **F**

Round 8,695 to the nearest thousand  → **O**

Scratch space:

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

To get the final clue, we must divide the enchanted sugar cubes equally among the hungry baby pegasi guarding the final bridge.

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:**

$70 \div 10 = \square$

$33 \div 11 = \square$

$90 \div 9 = \square$

$20 \div 4 = \square$

$16 \div 4 = \square$

$45 \div 5 = \square$

$40 \div 5 = \square$

$55 \div 5 = \square$

$24 \div 2 = \square$

$72 \div 12 = \square$

$4 \div 2 = \square$

**Step 2 - cross out the sentence with each answer:**

1. The villain summons a dark storm cloud, then flies over the gate on a pegasus speed saddle.
2. The villain opens a shimmering star portal, then deflects the guards using a glowing aura tiara.
3. The villain unleashes a burst of frost sparks, then flies over the gate on a pegasus speed saddle.
4. The villain unleashes a burst of frost sparks, then fades from sight under a glitter dust cloak.
5. The villain opens a shimmering star portal, then coordinates the escape with a telepathic headpiece.
6. The villain fires a brilliant rainbow blast, then coordinates the escape with a telepathic headpiece.
7. The villain summons a dark storm cloud, then fades from sight under a glitter dust cloak.
8. The villain fires a brilliant rainbow blast, then deflects the guards using a glowing aura tiara.
9. The villain fires a brilliant rainbow blast, then speeds away in golden wing boots.
10. The villain opens a shimmering star portal, then fades from sight under a glitter dust cloak.
11. The villain fires a brilliant rainbow blast, then fades from sight under a glitter dust cloak.
12. The villain raises a sturdy crystal shield, then fades from sight under a glitter dust cloak.

# Answer Key

## The Case of the Prism Academy Heist

### Culprit: Diamond

storm cloud conjuring · pegasus speed saddle · left-hoofed writer · pastel blue curls · sour green apples

Trail: Start 21 → Clue 1 17 → Clue 2 10 → Clue 3 5 → Clue 4 4 → Clue 5 1

### Clue 1 (Multiplication facts (1-12)): "THE THIEF DOES NOT HAVE A TELEPATHIC HEADPIECE"

$10 \times 9 = 90$  (T) ·  $8 \times 5 = 40$  (H) ·  $5 \times 9 = 45$  (A) ·  $10 \times 10 = 100$  (D) ·  $3 \times 1 = 3$  (O) ·  $3 \times 11 = 33$  (C) ·  $7 \times 1 = 7$  (V) ·  $7 \times 5 = 35$  (S) ·  $11 \times 10 = 110$  (P) ·  $5 \times 5 = 25$  (I) ·  $10 \times 12 = 120$  (E) ·  $3 \times 7 = 21$  (N) ·  $9 \times 4 = 36$  (L) ·  $12 \times 8 = 96$  (F)

### Clue 2 (Fractions of a number): "THE SUSPECT WRITES CODES WITH THEIR LEFT HOOF"

$\frac{2}{4}$  of 24 = 12 (T) ·  $\frac{5}{10}$  of 80 = 40 (F) ·  $\frac{1}{2}$  of 14 = 7 (D) ·  $\frac{3}{10}$  of 130 = 39 (S) ·  $\frac{1}{6}$  of 66 = 11 (R) ·  $\frac{1}{4}$  of 12 = 3 (C) ·  $\frac{2}{6}$  of 87 = 29 (P) ·  $\frac{2}{4}$  of 66 = 33 (L) ·  $\frac{2}{10}$  of 185 = 37 (U) ·  $\frac{3}{6}$  of 56 = 28 (H) ·  $\frac{2}{8}$  of 100 = 25 (O) ·  $\frac{4}{8}$  of 62 = 31 (W) ·  $\frac{4}{8}$  of 8 = 4 (I) ·  $\frac{2}{10}$  of 130 = 26 (E)

### Clue 3 (Order of operations): "THE THIEF RAN FROM SOUR GREEN APPLES"

$11 \times 6 - 21 = 45$  (T) ·  $16 + 2 \times 8 = 32$  (O) ·  $28 + 2 \times 8 = 44$  (M) ·  $11 \times 8 - 18 = 70$  (H) ·  $5 \times 10 - 9 = 41$  (R) ·  $11 \times 9 - 25 = 74$  (F) ·  $62 + 2 \times 2 = 66$  (L) ·  $9 \times 10 - 25 = 65$  (P) ·  $6 \times 4 - 12 = 12$  (A) ·  $56 + 4 \times 5 = 76$  (E) ·  $12 + 2 \times 6 = 24$  (S) ·  $7 + 2 \times 8 = 23$  (I) ·  $28 + 2 \times 6 = 40$  (N) ·  $11 \times 8 - 13 = 75$  (G) ·  $8 + 9 \times 2 = 26$  (U)

### Clue 4 (Rounding): "WE FOUND PASTEL BLUE CURLS AT THE SCENE"

Round 46 to the nearest ten = 50 (W) · Round 369 to the nearest ten = 370 (R) · Round 168 to the nearest ten = 170 (P) · Round 1,310 to the nearest hundred = 1300 (C) · Round 32 to the nearest ten = 30 (L) · Round 462 to the nearest hundred = 500 (B) · Round 291 to the nearest hundred = 300 (S) · Round 88 to the nearest ten = 90 (N) · Round 126 to the nearest ten = 130 (D) · Round 71 to the nearest ten = 70 (H) · Round 723 to the nearest hundred = 700 (U) · Round 288 to the nearest ten = 290 (T) · Round 247 to the nearest hundred = 200 (E) · Round 6,881 to the nearest thousand = 7000 (A) · Round 3,463 to the nearest thousand = 3000 (F) · Round 8,695 to the nearest thousand = 9000 (O)

### Clue 5 (Division facts (1-12)): surviving statement is box 1 → Diamond

$70 \div 10 = 7$  ·  $33 \div 11 = 3$  ·  $90 \div 9 = 10$  ·  $20 \div 4 = 5$  ·  $16 \div 4 = 4$  ·  $45 \div 5 = 9$  ·  $40 \div 5 = 8$  ·  $55 \div 5 = 11$  ·  $24 \div 2 = 12$  ·  $72 \div 12 = 6$  ·  $4 \div 2 = 2$