



The Mystery of the Moon Pearls

Grade 1 math · Fractions of a number, Multiplication, Rounding, Skip counting, Division · Reading level grades 1-2

Detective: _____ Date: _____

The royal crown of the Moon Princess has lost its magical glow. A sneaky star snatcher has taken the Moon Pearls! Detective, we must find the thief and save the night sky!

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 star snatcher is _____

Possible suspects

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

NAME	LUNAR POWER	SPACE GEAR	STAFF HAND	HAIR COLOR	LULLABY WEAKNESS
Gigi Glow	comet jumping	bubble helmet	holds staff in left hand	pink hair	soft music
Willa Wish	cloud hiding	rocket belt	holds staff in left hand	silver hair	star bells
Glowy Grace	star throwing	bubble helmet	holds staff in right hand	golden hair	star bells
Princess Clara	star throwing	star goggles	holds staff in right hand	golden hair	sweet tea
Zoe Zenith	star throwing	silver boots	holds staff in left hand	silver hair	sweet tea
Nova Nora	cloud hiding	bubble helmet	holds staff in right hand	pink hair	sweet tea
Bella Sparkle	star throwing	bubble helmet	holds staff in right hand	pink hair	sweet tea
Danny Dust	glow flying	bubble helmet	holds staff in right hand	golden hair	star bells
Princess Luna	glow flying	rocket belt	holds staff in right hand	golden hair	soft music
Robby Rocket	moon walking	silver boots	holds staff in right hand	silver hair	sweet tea
Penny Planet	star throwing	rocket belt	holds staff in right hand	pink hair	sweet tea
Skyler Star	moon walking	silver boots	holds staff in right hand	golden hair	soft music
Starlight Stella	glow flying	star goggles	holds staff in right hand	pink hair	sweet tea
Comet Cody	moon walking	star goggles	holds staff in left hand	pink hair	sweet tea
Prince Oliver	star throwing	glitter cape	holds staff in right hand	pink hair	star bells
Prince Leo	cloud hiding	glitter cape	holds staff in right hand	pink hair	sweet tea
Sunny Sam	star throwing	glitter cape	holds staff in right hand	golden hair	soft music
Benny Beam	moon walking	glitter cape	holds staff in left hand	golden hair	soft music
Felix Float	cloud hiding	bubble helmet	holds staff in left hand	pink hair	soft music
Pip the Pixie	glow flying	bubble helmet	holds staff in right hand	silver hair	soft music
Moony Mia	cloud hiding	star goggles	holds staff in left hand	pink hair	sweet tea

CLUE 1
Fractions of a number

Princess Clara has six star cookies. She gives half of them to a space bunny. In return, the bunny gives us a note.

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

T 34	24	26	T 34	24	28	26	36	37	2	26	39	4	2	T 34	25	26	35	10
35	10	2	30	21	26	T 34	33	26	15	T 34								

$1/2 \text{ of } 68 = \boxed{} \rightarrow \boxed{\text{T}}$

$3/6 \text{ of } 42 = \boxed{} \rightarrow \boxed{\text{K}}$

$4/8 \text{ of } 70 = \boxed{} \rightarrow \boxed{\text{A}}$

$2/10 \text{ of } 120 = \boxed{} \rightarrow \boxed{\text{H}}$

$1/5 \text{ of } 20 = \boxed{} \rightarrow \boxed{\text{N}}$

$4/8 \text{ of } 52 = \boxed{} \rightarrow \boxed{\text{E}}$

$6/8 \text{ of } 52 = \boxed{} \rightarrow \boxed{\text{S}}$

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

$1/2 \text{ of } 50 = \boxed{} \rightarrow \boxed{\text{W}}$

$8/10 \text{ of } 35 = \boxed{} \rightarrow \boxed{\text{I}}$

$3/5 \text{ of } 25 = \boxed{} \rightarrow \boxed{\text{L}}$

$1/8 \text{ of } 16 = \boxed{} \rightarrow \boxed{\text{O}}$

$3/4 \text{ of } 44 = \boxed{} \rightarrow \boxed{\text{B}}$

$5/8 \text{ of } 48 = \boxed{} \rightarrow \boxed{\text{C}}$

$4/5 \text{ of } 45 = \boxed{} \rightarrow \boxed{\text{F}}$

$4/8 \text{ of } 20 = \boxed{} \rightarrow \boxed{\text{R}}$

Scratch space:

CLUE 2
Multiplication facts (1-12)

We find rows of glowing moon plants. Counting them in groups helps us unlock a hidden star box.

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

T			T									T						
20	32	90	20	32	30	90	2	32	90	100	81	20	32	90				
	T							T						T				
50	20	22	2	2	30	6	20	32	90	48	30	24	32	20	32	22	6	81

$5 \times 4 = \square \rightarrow \text{**T**}$

$10 \times 9 = \square \rightarrow \text{**E**}$

$10 \times 10 = \square \rightarrow \text{**L**}$

$8 \times 4 = \square \rightarrow \text{**H**}$

$2 \times 11 = \square \rightarrow \text{**A**}$

$10 \times 3 = \square \rightarrow \text{**I**}$

$9 \times 9 = \square \rightarrow \text{**D**}$

$2 \times 1 = \square \rightarrow \text{**F**}$

$8 \times 6 = \square \rightarrow \text{**R**}$

$2 \times 12 = \square \rightarrow \text{**G**}$

$5 \times 10 = \square \rightarrow \text{**S**}$

$3 \times 2 = \square \rightarrow \text{**N**}$

Scratch space:

CLUE 3 Rounding

The moon ship radar only shows numbers rounded to the nearest ten. Read the screen to spot the path.

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

T																	
200	20	500	900	80	600	600	90	80	60	700	90	200	300	800	40	60	
30	800	400	700	40	500	500	200	600	70	60	90	400	200	500	90		

Round 182 to the nearest hundred → **T**

Round 76 to the nearest ten → **I**

Round 90 to the nearest ten → **A**

Round 849 to the nearest hundred → **O**

Round 911 to the nearest hundred → **V**

Round 541 to the nearest hundred → **E**

Round 594 to the nearest hundred → **L**

Round 23 to the nearest ten → **H**

Round 444 to the nearest hundred → **R**

Round 39 to the nearest ten → **W**

Round 303 to the nearest hundred → **D**

Round 29 to the nearest ten → **F**

Round 69 to the nearest ten → **U**

Round 61 to the nearest ten → **N**

Round 731 to the nearest hundred → **S**

Scratch space:

CLUE 4 Skip counting

To cross the star bridge, we must step on every second star. Follow the pattern to find the clue.

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

W													
15	36	24	130	140	9	6	39	40	10	12	65	18	26
21	26	10	39	9	6	130	24	30	12	9	120	18	39

Skip-count by 5s. Fill the blank: 5, 10, __, 20, 25 → **W**

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

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

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

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

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

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

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

Skip-count by 5s. Fill the blank: 5, 10, 15, 20, 25, 30, 35, __, 45, 50 → **B**

Skip-count by 3s. Fill the blank: 3, 6, __, 12, 15 → **N**

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

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

Skip-count by 2s. Fill the blank: 2, 4, 6, 8, 10, __, 14, 16 → **I**

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

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

Skip-count by 2s. Fill the blank: 2, 4, 6, 8, __, 12, 14 → **R**

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

Scratch space:

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

We have twelve magic moon stones. We share them equally among three space friends to hear their 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:

$36 \div 12 = \boxed{}$

$9 \div 9 = \boxed{}$

$40 \div 5 = \boxed{}$

$70 \div 10 = \boxed{}$

$144 \div 12 = \boxed{}$

$32 \div 8 = \boxed{}$

$88 \div 8 = \boxed{}$

$63 \div 7 = \boxed{}$

$55 \div 11 = \boxed{}$

$14 \div 7 = \boxed{}$

$72 \div 12 = \boxed{}$

Step 2 - cross out the sentence with each answer:

1. The villain flies with a soft glow, then adjusts their star goggles.
2. The villain hides in the pink clouds, then boosts away with a rocket belt.
3. The villain hides in the pink clouds, then swishes their glitter cape.
4. The villain walks slowly on the moon dust, then boosts away with a rocket belt.
5. The villain jumps from comet to comet, then adjusts their star goggles.
6. The villain flies with a soft glow, then taps their bubble helmet.
7. The villain hides in the pink clouds, then adjusts their star goggles.
8. The villain throws glowing stars, then taps their bubble helmet.
9. The villain hides in the pink clouds, then leaves silver boot prints.
10. The villain hides in the pink clouds, then taps their bubble helmet.
11. The villain flies with a soft glow, then leaves silver boot prints.
12. The villain walks slowly on the moon dust, then swishes their glitter cape.

Answer Key

The Mystery of the Moon Pearls

Culprit: Nova Nora

cloud hiding · bubble helmet · holds staff in right hand · pink hair · sweet tea

Trail: Start 21 → Clue 1 18 → Clue 2 12 → Clue 3 6 → Clue 4 4 → Clue 5 1

Clue 1 (Fractions of a number): "THE THIEF DOES NOT WEAR A ROCKET BELT"

$\frac{1}{2}$ of 68 = 34 (T) · $\frac{3}{6}$ of 42 = 21 (K) · $\frac{4}{8}$ of 70 = 35 (A) · $\frac{2}{10}$ of 120 = 24 (H) · $\frac{1}{5}$ of 20 = 4 (N) · $\frac{4}{8}$ of 52 = 26 (E) · $\frac{6}{8}$ of 52 = 39 (S) · $\frac{2}{10}$ of 185 = 37 (D) · $\frac{1}{2}$ of 50 = 25 (W) · $\frac{8}{10}$ of 35 = 28 (I) · $\frac{3}{5}$ of 25 = 15 (L) · $\frac{1}{8}$ of 16 = 2 (O) · $\frac{3}{4}$ of 44 = 33 (B) · $\frac{5}{8}$ of 48 = 30 (C) · $\frac{4}{5}$ of 45 = 36 (F) · $\frac{4}{8}$ of 20 = 10 (R)

Clue 2 (Multiplication facts (1-12)): "THE THIEF HELD THE STAFF IN THE RIGHT HAND"

$5 \times 4 = 20$ (T) · $10 \times 9 = 90$ (E) · $10 \times 10 = 100$ (L) · $8 \times 4 = 32$ (H) · $2 \times 11 = 22$ (A) · $10 \times 3 = 30$ (I) · $9 \times 9 = 81$ (D) · $2 \times 1 = 2$ (F) · $8 \times 6 = 48$ (R) · $2 \times 12 = 24$ (G) · $5 \times 10 = 50$ (S) · $3 \times 2 = 6$ (N)

Clue 3 (Rounding): "THE VILLAIN SAT DOWN FOR SWEET LUNAR TEA"

Round 182 to the nearest hundred = 200 (T) · Round 76 to the nearest ten = 80 (I) · Round 90 to the nearest ten = 90 (A) · Round 849 to the nearest hundred = 800 (O) · Round 911 to the nearest hundred = 900 (V) · Round 541 to the nearest hundred = 500 (E) · Round 594 to the nearest hundred = 600 (L) · Round 23 to the nearest ten = 20 (H) · Round 444 to the nearest hundred = 400 (R) · Round 39 to the nearest ten = 40 (W) · Round 303 to the nearest hundred = 300 (D) · Round 29 to the nearest ten = 30 (F) · Round 69 to the nearest ten = 70 (U) · Round 61 to the nearest ten = 60 (N) · Round 731 to the nearest hundred = 700 (S)

Clue 4 (Skip counting): "WE FOUND A BRIGHT STRAND OF PINK HAIR"

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

Clue 5 (Division facts (1-12)): surviving statement is box 10 → Nova Nora

$36 \div 12 = 3$ · $9 \div 9 = 1$ · $40 \div 5 = 8$ · $70 \div 10 = 7$ · $144 \div 12 = 12$ · $32 \div 8 = 4$ · $88 \div 8 = 11$ · $63 \div 7 = 9$ · $55 \div 11 = 5$ · $14 \div 7 = 2$ · $72 \div 12 = 6$