



The Mars Crystal Mystery

Grade 2 math · Multiplication, Word problems, Place value, Addition, Division · Reading level grades 1-2

Detective: _____ Date: _____

The gold space crystal is gone! The Space Bandit took it from the launch pad. We must find them before they fly away into deep space!

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 Space Bandit is _____

Possible suspects

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

NAME	JETPACK	LASER TOOL	GLOVE MARK	HELMET VISOR	SPACE TRAP
Jessica	blue thrusters	ice cutter	left glove badge	green visor	sticky space slime
Alan	gravity boots	dust blaster	left glove badge	green visor	sticky space slime
Guion	red thrusters	ice cutter	left glove badge	green visor	bright flash light
Christina	bubble boots	moon beam	right glove badge	gold visor	magnetic net
Scott	blue thrusters	ice cutter	right glove badge	green visor	bright flash light
Michael	red thrusters	ice cutter	left glove badge	gold visor	sticky space slime
Edward	red thrusters	ice cutter	left glove badge	gold visor	bright flash light
Buzz	blue thrusters	moon beam	left glove badge	green visor	sticky space slime
Victor	gravity boots	rock grabber	left glove badge	green visor	sticky space slime
Guy	blue thrusters	moon beam	right glove badge	green visor	sticky space slime
Sally	solar wings	rock grabber	left glove badge	silver visor	sticky space slime
Neil	red thrusters	star laser	left glove badge	gold visor	sticky space slime
Sunita	blue thrusters	rock grabber	left glove badge	green visor	bright flash light
Roberta	solar wings	ice cutter	right glove badge	gold visor	magnetic net
Charles	red thrusters	dust blaster	right glove badge	gold visor	magnetic net
Mae	bubble boots	moon beam	left glove badge	green visor	magnetic net
Yuri	red thrusters	rock grabber	left glove badge	gold visor	bright flash light
John	blue thrusters	rock grabber	right glove badge	green visor	bright flash light
Kathy	bubble boots	star laser	right glove badge	green visor	magnetic net
Peggy	solar wings	moon beam	right glove badge	silver visor	sticky space slime
Kalpana	solar wings	star laser	left glove badge	green visor	sticky space slime

CLUE 1

Multiplication facts (1-12)

The space docks have rows of ships. We count the ships in groups to find a note.

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

T							T							T				
30	18	9	2	15	121	6	55	30	6	64	9	25	121	64	30	56	25	9
T						T						T						
30	18	9	6	56	25	30	2	108	15	25	30	9	21					

$5 \times 6 = \square \rightarrow \boxed{\text{T}}$

$8 \times 7 = \square \rightarrow \boxed{\text{U}}$

$7 \times 3 = \square \rightarrow \boxed{\text{R}}$

$6 \times 3 = \square \rightarrow \boxed{\text{H}}$

$11 \times 5 = \square \rightarrow \boxed{\text{I}}$

$3 \times 5 = \square \rightarrow \boxed{\text{A}}$

$11 \times 11 = \square \rightarrow \boxed{\text{N}}$

$3 \times 2 = \square \rightarrow \boxed{\text{D}}$

$2 \times 1 = \square \rightarrow \boxed{\text{B}}$

$12 \times 9 = \square \rightarrow \boxed{\text{L}}$

$5 \times 5 = \square \rightarrow \boxed{\text{S}}$

$1 \times 9 = \square \rightarrow \boxed{\text{E}}$

$8 \times 8 = \square \rightarrow \boxed{\text{O}}$

Scratch space:

CLUE 2

Word problems

A baby alien lost its space rocks. We solved the word puzzle to get a secret file.

Solve each problem, then write its letter in the boxes to fill in the missing word.

A witness saw the villain was

L			
33	28	22	29

	L			
31	33	11	16	28

B	A	D		
			31	28

 .

Zoggy found 8 alien coin yesterday and 25 more today.
How many alien coin in all?

Answer: →

L

There were 29 moon rock. 7 were used up. How many
moon rock are left?

Answer: →

F

Zoggy found 10 alien coin yesterday and 18 more today.
How many alien coin in all?

Answer: →

E

Zoggy found 7 toy rocket yesterday and 4 more today. How
many toy rocket in all?

Answer: →

O

There were 34 alien coin. 3 were used up. How many alien
coin are left?

Answer: →

G

Zoggy found 24 star badge yesterday and 5 more today.
How many star badge in all?

Answer: →

T

Zoggy lined up 2 rows of 8 star badge. How many star
badge in all?

Answer: →

V

Scratch space:

CLUE 3

The robot screen shows numbers in tens and ones. We read the code to unlock a drawer.

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

Diagram illustrating memory slots and their values:

- Row 1 (Top): 18 slots. The 1st slot is highlighted in orange and labeled 'T'. The 17th slot is highlighted in orange and labeled 'T'. The values below the slots are: 20, 94, 80, 50, 51, 92, 88, 80, 50, 51, 11, 45, 80, 59, 20, 94, 80.
- Row 2 (Bottom): 10 slots. The 6th slot is highlighted in orange and labeled 'T'. The values below the slots are: 98, 34, 96, 59, 92, 20, 59, 11, 45, 96.

What number has 2 tens and 0 ones?



What number has 9 tens and 6 ones?

A diagram showing a transition from an empty box to a box containing the letter N. The first box is empty, followed by a right-pointing arrow, and then a box containing the letter N.

What number has 9 tens and 4 ones?

A diagram showing a transformation. On the left is a simple rectangular box. An arrow points from this box to another rectangular box on the right. This second box has a thick border and contains the letter 'H' in a bold, black, sans-serif font.

What number has 1 ten and 1 one?

A diagram showing a box with a question mark mapping to a box with the letter O.

What number has 9 tens and 8 ones?

A diagram consisting of a rectangular box on the left, followed by a right-pointing arrow, and then another rectangular box on the right containing the letter 'B'.

What number has 9 tens and 2 ones?

A diagram illustrating a transformation. On the left is a simple rectangular box. An arrow points from this box to a second box on the right. The second box is identical in shape but has a thick border and contains the letter 'I' in the center.

What number has 8 tens and 0 ones?

What number has 5 tens and 9 ones?

→ **D**

What number has 5 tens and 1 one?

A diagram illustrating a transformation. On the left is a simple rectangular box. An arrow points from this box to another rectangular box on the right. This second box contains the letter 'L'.

What number has 4 tens and 5 ones?

A diagram illustrating a transformation. On the left is a simple rectangular box. An arrow points from this box to another rectangular box on the right. This second box contains the letter 'W' in a bold, sans-serif font.

What number has 3 tens and 4 ones?

A diagram showing a box on the left with an arrow pointing to a box on the right. The box on the right contains the letter 'A'.

What number has 5 tens and 0 ones?

A diagram illustrating a transition. On the left is a thin black rectangular box. An arrow points from this box to a second box on the right. The second box is a thick black square containing the letter 'S' in a bold, black, sans-serif font.

What number has 8 tens and 8 ones?



Scratch space:

CLUE 4

Addition

We put together all the star charts. Adding up the map numbers shows a new path.

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

W															
83	62	50	98	23	64	79	44	41	62	62	64	44	48	22	57

57	36	22	41	79	57

$24 + 59 = \square \rightarrow \boxed{\text{W}}$

$8 + 15 = \square \rightarrow \boxed{\text{U}}$

$30 + 20 = \square \rightarrow \boxed{\text{F}}$

$24 + 55 = \square \rightarrow \boxed{\text{D}}$

$47 + 51 = \square \rightarrow \boxed{\text{O}}$

$18 + 44 = \square \rightarrow \boxed{\text{E}}$

$24 + 33 = \square \rightarrow \boxed{\text{S}}$

$19 + 17 = \square \rightarrow \boxed{\text{H}}$

$18 + 30 = \square \rightarrow \boxed{\text{L}}$

$24 + 20 = \square \rightarrow \boxed{\text{G}}$

$35 + 29 = \square \rightarrow \boxed{\text{N}}$

$9 + 13 = \square \rightarrow \boxed{\text{A}}$

$28 + 13 = \square \rightarrow \boxed{\text{R}}$

Scratch space:

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

We split the power blocks into equal piles. Each pile has a secret clue on the bottom.

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:

$121 \div 11 = \boxed{}$

$72 \div 6 = \boxed{}$

$10 \div 10 = \boxed{}$

$36 \div 12 = \boxed{}$

$24 \div 4 = \boxed{}$

$7 \div 1 = \boxed{}$

$30 \div 6 = \boxed{}$

$54 \div 6 = \boxed{}$

$6 \div 3 = \boxed{}$

$90 \div 9 = \boxed{}$

$40 \div 5 = \boxed{}$

Step 2 - cross out the sentence with each answer:

1. The villain ran across the space dock, then stole the crystal with a rock grabber.
2. The villain leaped over the rover, then zapped the lock with a star laser.
3. The villain leaped over the rover, then cleared the path with a dust blaster.
4. The villain floated through the hatch, then zapped the lock with a star laser.
5. The villain flew past the satellite, then stole the crystal with a rock grabber.
6. The villain ran across the space dock, then cut the glass with an ice cutter.
7. The villain leaped over the rover, then stole the crystal with a rock grabber.
8. The villain flew past the satellite, then cleared the path with a dust blaster.
9. The villain floated through the hatch, then cut the glass with an ice cutter.
10. The villain flew past the satellite, then zapped the lock with a star laser.
11. The villain leaped over the rover, then melted the door with a moon beam.
12. The villain leaped over the rover, then cut the glass with an ice cutter.

Answer Key

The Mars Crystal Mystery

Culprit: Kalpana

solar wings · star laser · left glove badge · green visor · sticky space slime

Trail: Start 21 → Clue 1 19 → Clue 2 12 → Clue 3 7 → Clue 4 4 → Clue 5 1

Clue 1 (Multiplication facts (1-12)): "THE BANDIT DOES NOT USE THE DUST BLASTER"

$5 \times 6 = 30$ (T) · $8 \times 7 = 56$ (U) · $7 \times 3 = 21$ (R) · $6 \times 3 = 18$ (H) · $11 \times 5 = 55$ (I) · $3 \times 5 = 15$ (A) · $11 \times 11 = 121$ (N) · $3 \times 2 = 6$ (D) · $2 \times 1 = 2$ (B) · $12 \times 9 = 108$ (L) · $5 \times 5 = 25$ (S) · $1 \times 9 = 9$ (E) · $8 \times 8 = 64$ (O)

Clue 2 (Word problems): "LEFT GLOVE BADGE"

Zoggy found 8 alien coin yesterday and 25 more today. How many alien coin in all? = 33 (L) · There were 29 moon rock. 7 were used up. How many moon rock are left? = 22 (F) · Zoggy found 10 alien coin yesterday and 18 more today. How many alien coin in all? = 28 (E) · Zoggy found 7 toy rocket yesterday and 4 more today. How many toy rocket in all? = 11 (O) · There were 34 alien coin. 3 were used up. How many alien coin are left? = 31 (G) · Zoggy found 24 star badge yesterday and 5 more today. How many star badge in all? = 29 (T) · Zoggy lined up 2 rows of 8 star badge. How many star badge in all? = 16 (V)

Clue 3 (Place value): "THE SLIME SLOWED THE BANDIT DOWN"

What number has 2 tens and 0 ones? = 20 (T) · What number has 9 tens and 6 ones? = 96 (N) · What number has 9 tens and 4 ones? = 94 (H) · What number has 1 ten and 1 one? = 11 (O) · What number has 9 tens and 8 ones? = 98 (B) · What number has 9 tens and 2 ones? = 92 (I) · What number has 8 tens and 0 ones? = 80 (E) · What number has 5 tens and 9 ones? = 59 (D) · What number has 5 tens and 1 one? = 51 (L) · What number has 4 tens and 5 ones? = 45 (W) · What number has 3 tens and 4 ones? = 34 (A) · What number has 5 tens and 0 ones? = 50 (S) · What number has 8 tens and 8 ones? = 88 (M)

Clue 4 (Addition): "WE FOUND GREEN GLASS SHARDS"

$24 + 59 = 83$ (W) · $8 + 15 = 23$ (U) · $30 + 20 = 50$ (F) · $24 + 55 = 79$ (D) · $47 + 51 = 98$ (O) · $18 + 44 = 62$ (E) · $24 + 33 = 57$ (S) · $19 + 17 = 36$ (H) · $18 + 30 = 48$ (L) · $24 + 20 = 44$ (G) · $35 + 29 = 64$ (N) · $9 + 13 = 22$ (A) · $28 + 13 = 41$ (R)

Clue 5 (Division facts (1-12)): surviving statement is box 4 → Kalpana

$121 \div 11 = 11$ · $72 \div 6 = 12$ · $10 \div 10 = 1$ · $36 \div 12 = 3$ · $24 \div 4 = 6$ · $7 \div 1 = 7$ · $30 \div 6 = 5$ · $54 \div 6 = 9$ · $6 \div 3 = 2$ · $90 \div 9 = 10$ · $40 \div 5 = 8$