



The Mesozoic Heist

Grade 7 math · Integers, Multi-step word problems, Percentages, Order of operations, Two-step equations · Reading level grades 7-9

Detective: _____ **Date:** _____

An alarm has shattered the night at the Mesozoic Reserve. Someone bypassed the advanced security grid and stole the priceless, glowing Genesis Egg from the nursery. The suspect list is filled with elite handlers and visiting researchers. We must crack the security logs, analyze the physical evidence, and pinpoint the culprit before they escape the island.

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 Dino-Poacher is _____

Possible suspects

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

NAME	PRIMARY GEAR	STOLEN TECH	FOOTPRINT STRIDE	HELMET STRIPE	SCENT FOIL
Billy Brennan	Sonic Whistler	Grappling Hook	Right-Leaning Stride	Red Helmet Stripe	Ammonia Mist
Roland Tembo	Net Launcher	Cloaking Field	Left-Leaning Stride	Blue Helmet Stripe	Ammonia Mist
Alan Grant	Sonic Whistler	Mag-Boots	Left-Leaning Stride	Blue Helmet Stripe	Ammonia Mist
Roxie Carter	Sonic Whistler	Holographic Decoy	Right-Leaning Stride	Red Helmet Stripe	Citronella Smoke
Sammy Gutierrez	Net Launcher	Cloaking Field	Right-Leaning Stride	Blue Helmet Stripe	Citronella Smoke
Ian Malcolm	Pheromone Dart	Thermal Visor	Right-Leaning Stride	Green Helmet Stripe	Citronella Smoke
Mae Turner	Net Launcher	Mag-Boots	Left-Leaning Stride	Red Helmet Stripe	Ammonia Mist
Kenji Kon	Net Launcher	Thermal Visor	Left-Leaning Stride	Blue Helmet Stripe	Ammonia Mist
Ben Pincus	Sonic Whistler	Thermal Visor	Left-Leaning Stride	Green Helmet Stripe	Ammonia Mist
Claire Dearing	Pheromone Dart	Cloaking Field	Left-Leaning Stride	Red Helmet Stripe	Ammonia Mist
Henry Wu	Pheromone Dart	Thermal Visor	Left-Leaning Stride	Green Helmet Stripe	Ammonia Mist
Robert Muldoon	Net Launcher	Thermal Visor	Right-Leaning Stride	Green Helmet Stripe	Ammonia Mist
Ellie Sattler	Pheromone Dart	Thermal Visor	Right-Leaning Stride	Blue Helmet Stripe	Ammonia Mist
Sarah Harding	Shock Prod	Grappling Hook	Left-Leaning Stride	Blue Helmet Stripe	Ammonia Mist
Gerry Harding	Sonic Whistler	Holographic Decoy	Left-Leaning Stride	Blue Helmet Stripe	Ammonia Mist
Dave Larson	Net Launcher	Cloaking Field	Right-Leaning Stride	Red Helmet Stripe	Eucalyptus Spray
Kayla Watts	Shock Prod	Thermal Visor	Left-Leaning Stride	Red Helmet Stripe	Ammonia Mist
Nick Van Owen	Net Launcher	Cloaking Field	Left-Leaning Stride	Blue Helmet Stripe	Citronella Smoke
Darius Bowman	Net Launcher	Cloaking Field	Left-Leaning Stride	Green Helmet Stripe	Citronella Smoke
Brooklynn Rider	Sonic Whistler	Thermal Visor	Right-Leaning Stride	Blue Helmet Stripe	Ammonia Mist
Ramsay Cole	Pheromone Dart	Mag-Boots	Left-Leaning Stride	Blue Helmet Stripe	Citronella Smoke

CLUE 1 Integers

We recovered a discarded digital manifest detailing stolen fossil shipments. Solving the multi-step inventory log reveals what gear the suspect lacked.

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

T			T											T				
23	2	4	23	2	18	4	13	25	3	4	21	26	3	23	29	21	4	
T																		
23	2	4	2	3	16	3	10	12	22	8	2	18	20	25	4	20	3	19

$$(-8) + 31 = \boxed{} \rightarrow \boxed{\text{T}}$$

$$(-5) + 21 = \boxed{} \rightarrow \boxed{\text{L}}$$

$$1 - (-3) = \boxed{} \rightarrow \boxed{\text{E}}$$

$$15 - (-7) = \boxed{} \rightarrow \boxed{\text{A}}$$

$$2 - (-6) = \boxed{} \rightarrow \boxed{\text{P}}$$

$$14 - (-11) = \boxed{} \rightarrow \boxed{\text{D}}$$

$$6 - (-4) = \boxed{} \rightarrow \boxed{\text{G}}$$

$$14 - (-12) = \boxed{} \rightarrow \boxed{\text{N}}$$

$$(-11) + 30 = \boxed{} \rightarrow \boxed{\text{Y}}$$

$$(-11) + 40 = \boxed{} \rightarrow \boxed{\text{U}}$$

$$(-12) + 14 = \boxed{} \rightarrow \boxed{\text{H}}$$

$$(-5) + 8 = \boxed{} \rightarrow \boxed{\text{O}}$$

$$(-7) + 25 = \boxed{} \rightarrow \boxed{\text{I}}$$

$$6 - (-15) = \boxed{} \rightarrow \boxed{\text{S}}$$

$$(-13) + 25 = \boxed{} \rightarrow \boxed{\text{R}}$$

$$17 - (-3) = \boxed{} \rightarrow \boxed{\text{C}}$$

$$11 - (-2) = \boxed{} \rightarrow \boxed{\text{F}}$$

Scratch space:

CLUE 2

Multi-step word problems

The security system recorded temperature drops in the cryo-storage chambers. Calculating these integer fluctuations reveals the suspect's unique walking stride.

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

A witness saw the villain was

L L G S R D .

89 76 81 27 89 76 25 75 72 75 27 72 76

There were 566 dinosaur eggs in all. 2 Dino Recovery Unit used 16 dinosaur eggs each. The other 6 Dino Recovery Unit shared the rest equally. How many dinosaur eggs did each of the other Dino Recovery Unit get?

Answer: → L

Paleo-tracker filled 5 boxes with 3 gps beacons each, then found 10 more gps beacons. How many gps beacons are there in all?

Answer: → A

There were 112 tracking collars in all. 31 tracking collars were set aside. The rest were shared equally among 3 Dino Recovery Unit. How many tracking collars did each get?

Answer: → T

Paleo-tracker collected 273 gps beacons in the morning and 87 gps beacons in the afternoon, then split them equally among 5 Dino Recovery Unit. How many gps beacons did each get?

Answer: → I

Paleo-tracker collected 479 fossilized teeth in the morning and 7 fossilized teeth in the afternoon, then split them equally among 6 Dino Recovery Unit. How many fossilized teeth did each get?

Answer: → F

Paleo-tracker filled 6 boxes with 3 fossilized teeth each, then found 57 more fossilized teeth. How many fossilized teeth are there in all?

Answer: → N

Paleo-tracker filled 3 boxes with 4 tracking collars each, then found 64 more tracking collars. How many tracking collars are there in all?

Answer: → E

Scratch space:

CLUE 3 Percentages

Sensors detected a chemical reaction when the thief ran through our security sprays. Computing the percentage of active compounds identifies their weakness.

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

T																		
38	5	44	51	44	10	44	26	51	39	32	39	1	39	4	43	51	35	14

T													T
38	5	44	39	14	14	35	32	34	39	14	34	54	38

25% of 152 = → T	50% of 2 = → W	5% of 80 = → Y
10% of 100 = → B	5% of 520 = → L	25% of 216 = → S
20% of 220 = → E	10% of 50 = → H	60% of 65 = → A
25% of 56 = → M	5% of 700 = → O	50% of 64 = → N
5% of 680 = → I	10% of 430 = → F	20% of 255 = → R

Scratch space:

CLUE 4 Order of operations

The automated dome lights flashed in a precise mathematical sequence during the breach. Evaluating the order of operations in the power grid logs reveals the color of the thief's helmet stripe.

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

T												T	T			
67	76	19	18	41	81	19	45	41	35	85	97	67	67	19	49	41
102	89	111	19	76	19	89	81	19	67	35	67	45	87	85	19	

$13 + 6 \times 9 = \square \rightarrow$ T	$13 + 2 \times 3 = \square \rightarrow$ E	$63 + 4 \times 6 = \square \rightarrow$ I
$11 \times 11 - 10 = \square \rightarrow$ U	$11 \times 10 - 8 = \square \rightarrow$ B	$6 \times 6 - 1 = \square \rightarrow$ S
$10 \times 11 - 21 = \square \rightarrow$ L	$73 + 4 \times 2 = \square \rightarrow$ M	$4 \times 12 - 3 = \square \rightarrow$ R
$91 + 3 \times 2 = \square \rightarrow$ O	$5 \times 6 - 12 = \square \rightarrow$ C	$12 \times 8 - 11 = \square \rightarrow$ P
$11 \times 7 - 28 = \square \rightarrow$ D	$8 \times 12 - 20 = \square \rightarrow$ H	$8 \times 7 - 15 = \square \rightarrow$ A

Scratch space:

CLUE 5**Two-step equations - the last clue**

Our drone radar tracked a fleeing suspect through the jungle canopy. Solving this two-step motion equation confirms the helmet stripe of the runner.

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:

$5x + 12 = 52, x = \boxed{}$

$6x + 6 = 72, x = \boxed{}$

$3x + 2 = 17, x = \boxed{}$

$5x + 8 = 68, x = \boxed{}$

$4x + 8 = 44, x = \boxed{}$

$3x + 1 = 22, x = \boxed{}$

$6x + 4 = 28, x = \boxed{}$

$5x + 1 = 51, x = \boxed{}$

$4x + 8 = 32, x = \boxed{}$

$3x + 3 = 9, x = \boxed{}$

$6x + 9 = 15, x = \boxed{}$

Step 2 - cross out the sentence with each answer:

1. The villain released a cloud of sleeping gas, then activated a tactical cloaking field.
2. The villain released a cloud of sleeping gas, then deployed a flashing holographic decoy.
3. The villain swung a high-voltage shock prod, then escaped using a grappling hook.
4. The villain fired a sonic whistler to daze the guards, then activated a tactical cloaking field.
5. The villain shot a heavy net launcher over the gates, then scanned the area with a thermal visor.
6. The villain fired a sonic whistler to daze the guards, then scanned the area with a thermal visor.
7. The villain swung a high-voltage shock prod, then scanned the area with a thermal visor.
8. The villain shot a heavy net launcher over the gates, then activated a tactical cloaking field.
9. The villain released a cloud of sleeping gas, then scanned the area with a thermal visor.
10. The villain shot a heavy net launcher over the gates, then scaled the metal walls with mag-boots.
11. The villain fired a sonic whistler to daze the guards, then scaled the metal walls with mag-boots.
12. The villain released a cloud of sleeping gas, then scaled the metal walls with mag-boots.

Answer Key

The Mesozoic Heist

Culprit: Sarah Harding

Shock Prod · Grappling Hook · Left-Leaning Stride · Blue Helmet Stripe · Ammonia Mist

Trail: Start 21 → Clue 1 19 → Clue 2 12 → Clue 3 9 → Clue 4 4 → Clue 5 1

Clue 1 (Integers): "THE THIEF DOES NOT USE THE HOLOGRAPHIC DECOY"

$(-8) + 31 = 23$ (T) · $(-5) + 21 = 16$ (L) · $1 - (-3) = 4$ (E) · $15 - (-7) = 22$ (A) · $2 - (-6) = 8$ (P) · $14 - (-11) = 25$ (D) · $6 - (-4) = 10$ (G) · $14 - (-12) = 26$ (N) · $(-11) + 30 = 19$ (Y) · $(-11) + 40 = 29$ (U) · $(-12) + 14 = 2$ (H) · $(-5) + 8 = 3$ (O) · $(-7) + 25 = 18$ (I) · $6 - (-15) = 21$ (S) · $(-13) + 25 = 12$ (R) · $17 - (-3) = 20$ (C) · $11 - (-2) = 13$ (F)

Clue 2 (Multi-step word problems): "LEFT LEANING STRIDE"

There were 566 dinosaur eggs in all. 2 Dino Recovery Unit used 16 dinosaur eggs each. The other 6 Dino Recovery Unit shared the rest equally. How many dinosaur eggs did each of the other Dino Recovery Unit get? = 89 (L) · Paleo-tracker filled 5 boxes with 3 gps beacons each, then found 10 more gps beacons. How many gps beacons are there in all? = 25 (A) · There were 112 tracking collars in all. 31 tracking collars were set aside. The rest were shared equally among 3 Dino Recovery Unit. How many tracking collars did each get? = 27 (T) · Paleo-tracker collected 273 gps beacons in the morning and 87 gps beacons in the afternoon, then split them equally among 5 Dino Recovery Unit. How many gps beacons did each get? = 72 (I) · Paleo-tracker collected 479 fossilized teeth in the morning and 7 fossilized teeth in the afternoon, then split them equally among 6 Dino Recovery Unit. How many fossilized teeth did each get? = 81 (F) · Paleo-tracker filled 6 boxes with 3 fossilized teeth each, then found 57 more fossilized teeth. How many fossilized teeth are there in all? = 75 (N) · Paleo-tracker filled 3 boxes with 4 tracking collars each, then found 64 more tracking collars. How many tracking collars are there in all? = 76 (E)

Clue 3 (Percentages): "THE REBEL RAN AWAY FROM THE AMMONIA MIST"

25% of 152 = 38 (T) · 50% of 2 = 1 (W) · 5% of 80 = 4 (Y) · 10% of 100 = 10 (B) · 5% of 520 = 26 (L) · 25% of 216 = 54 (S) · 20% of 220 = 44 (E) · 10% of 50 = 5 (H) · 60% of 65 = 39 (A) · 25% of 56 = 14 (M) · 5% of 700 = 35 (O) · 50% of 64 = 32 (N) · 5% of 680 = 34 (I) · 10% of 430 = 43 (F) · 20% of 255 = 51 (R)

Clue 4 (Order of operations): "THE CAMERA SPOTTED A BLUE HELMET STRIPE"

$13 + 6 \times 9 = 67$ (T) · $13 + 2 \times 3 = 19$ (E) · $63 + 4 \times 6 = 87$ (I) · $11 \times 11 - 10 = 111$ (U) · $11 \times 10 - 8 = 102$ (B) · $6 \times 6 - 1 = 35$ (S) · $10 \times 11 - 21 = 89$ (L) · $73 + 4 \times 2 = 81$ (M) · $4 \times 12 - 3 = 45$ (R) · $91 + 3 \times 2 = 97$ (O) · $5 \times 6 - 12 = 18$ (C) · $12 \times 8 - 11 = 85$ (P) · $11 \times 7 - 28 = 49$ (D) · $8 \times 12 - 20 = 76$ (H) · $8 \times 7 - 15 = 41$ (A)

Clue 5 (Two-step equations): surviving statement is box 3 → Sarah Harding

$5x + 12 = 52, x = 8$ · $6x + 6 = 72, x = 11$ · $3x + 2 = 17, x = 5$ · $5x + 8 = 68, x = 12$ · $4x + 8 = 44, x = 9$ · $3x + 1 = 22, x = 7$ · $6x + 4 = 28, x = 4$ · $5x + 1 = 51, x = 10$ · $4x + 8 = 32, x = 6$ · $3x + 3 = 9, x = 2$ · $6x + 9 = 15, x = 1$