The Mystery of the Missing Golden Compass

Grade 3 math · Rounding, Addition, Subtraction, Multiplication, Division · Reading level grades 3-4

Detective: _____ **Date:** _____

Oh no! Someone has snuck onto the Jolly Barnacle and stolen the Salty Captain's favorite golden compass. The thief left behind footprints, weird marks, and some messy clues. We need to crack the pirate code and find the culprit before they sail away!

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 pirate thief is _____

Possible suspects

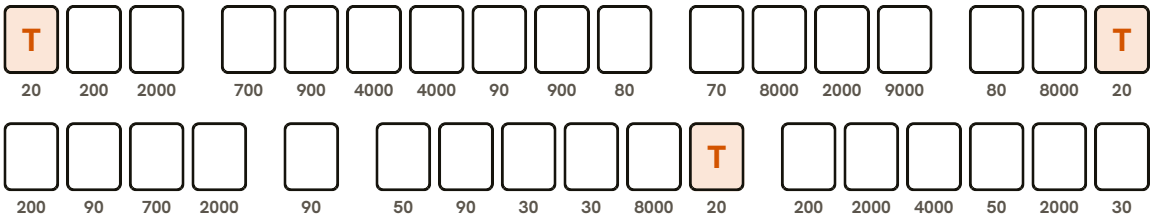
Cross off a row as each clue rules it out. The one left at the end is the culprit.

NAME	PIRATE SKILL	FAVORITE TOOL	PIRATE TYPE	HAIR STYLE	BIG FEAR
Silver Sid	Sword Spinning	Golden Cutlass	Pirate Girl	Bandana Braid	Fear of Frogs
Wavey Wendy	Cannon Blasting	Compass Watch	Pirate Girl	Bandana Braid	Fear of Frogs
Pip Squeak	Map Reading	Parrot Helper	Pirate Girl	Curly Beard	Fear of Frogs
Jolly Roger	Cannon Blasting	Iron Anchor	Pirate Girl	Bandana Braid	Sea Sickness
Salty Susan	Rope Swinging	Golden Cutlass	Pirate Girl	Bandana Braid	Fear of Frogs
Anchor Andy	Rope Swinging	Compass Watch	Pirate Girl	Curly Beard	Fear of Frogs
First Mate Molly	Map Reading	Iron Anchor	Pirate Girl	Bandana Braid	Sea Sickness
Bluebeard Bob	Sail Rigging	Golden Cutlass	Pirate Girl	Bandana Braid	Sea Sickness
Redbeard Roy	Map Reading	Iron Anchor	Pirate Boy	Bandana Braid	Sea Sickness
Pegleg Pete	Rope Swinging	Golden Cutlass	Pirate Girl	Bandana Braid	Sea Sickness
Captain Hook	Cannon Blasting	Parrot Helper	Pirate Girl	Messy Dreadlocks	Tickly Feathers
Barnaby Barnacle	Sword Spinning	Parrot Helper	Pirate Boy	Bandana Braid	Fear of Frogs
Captain Coral	Cannon Blasting	Parrot Helper	Pirate Girl	Bandana Braid	Fear of Frogs
Sharky Sam	Sword Spinning	Parrot Helper	Pirate Boy	Bandana Braid	Tickly Feathers
Bootleg Betty	Sword Spinning	Bone Hook	Pirate Girl	Bandana Braid	Fear of Frogs
Captain Crabby	Sail Rigging	Iron Anchor	Pirate Girl	Messy Dreadlocks	Sea Sickness
Cannonball Cole	Map Reading	Bone Hook	Pirate Boy	Messy Dreadlocks	Tickly Feathers
Marina Meg	Cannon Blasting	Parrot Helper	Pirate Boy	Curly Beard	Fear of Frogs
Cutlass Cody	Map Reading	Iron Anchor	Pirate Girl	Messy Dreadlocks	Sea Sickness
Scurvy Sally	Rope Swinging	Parrot Helper	Pirate Girl	Bandana Braid	Sea Sickness
Gunpowder Gus	Sword Spinning	Iron Anchor	Pirate Boy	Curly Beard	Fear of Frogs

CLUE 1 Rounding

> The ship's spyglass has a cracked lens that rounds every distance to the nearest ten paces. You spot a distant pirate ship and read the blurry map coordinate.

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



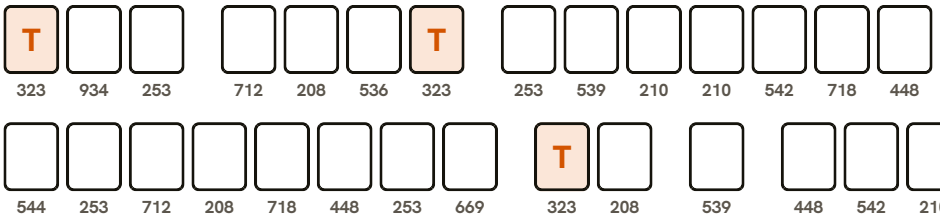
Round 16 to the nearest ten		T	Round 9,496 to the nearest thousand		S	Round 27 to the nearest ten		R
Round 84 to the nearest ten		N	Round 714 to the nearest hundred		V	Round 47 to the nearest ten		P
Round 1,505 to the nearest thousand		E	Round 70 to the nearest ten		D	Round 7,889 to the nearest thousand		O
Round 949 to the nearest hundred		I	Round 94 to the nearest ten		A	Round 4,195 to the nearest thousand		L
Round 174 to the nearest hundred		H						

Scratch space:

CLUE 2 Addition

> A friendly seagull drops a pile of shiny stolen coins on the deck. We must add the piles together to find where the suspect dropped their secret notebook.

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



164 + 159 =		T	72 + 136 =		O	376 + 168 =		B
83 + 127 =		R	225 + 311 =		S	344 + 374 =		N
419 + 515 =		H	352 + 360 =		L	307 + 235 =		I
396 + 273 =		D	265 + 274 =		A	140 + 113 =		E
162 + 286 =		G						

Scratch space:

CLUE 3 Subtraction

> The thief raided the galley and took most of the hardtack biscuits. By subtracting the remaining biscuits from the full barrel, we get a clue to the pirate's weakness.

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

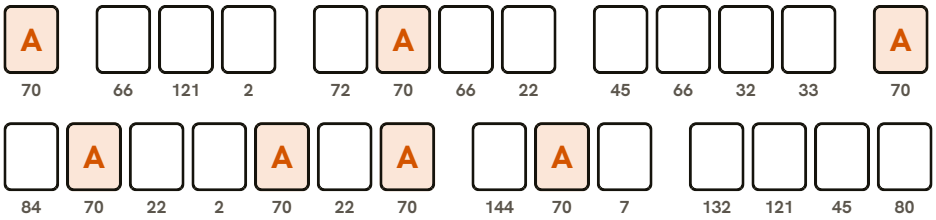
1030 - 254 =		T	730 - 305 =		C	675 - 286 =		S
332 - 223 =		I	664 - 400 =		L	1235 - 393 =		A
1188 - 349 =		R	528 - 328 =		W	606 - 297 =		E
603 - 132 =		K	437 - 175 =		Y	675 - 326 =		H
434 - 290 =		O	676 - 325 =		U	1247 - 371 =		G
433 - 194 =		B	1017 - 324 =		V			

Scratch space:

CLUE 4 Multiplication facts (1-12)

> The cook notices the coconut crates are stacked in perfect rows. Multiplying the rows by the columns tells us exactly which hair type was left behind on the wood.

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



10 × 7 =		A	11 × 2 =		N	7 × 12 =		B
11 × 3 =		M	5 × 9 =		F	8 × 4 =		O
11 × 12 =		L	11 × 11 =		E	6 × 12 =		Y
7 × 1 =		S	8 × 10 =		T	1 × 2 =		D
6 × 11 =		R	12 × 12 =		W			

Scratch space:

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

> The junior crew splits a bunch of bananas equally among their small rowboats. Dividing the fruit reveals a clue about whether the runaway villain was a boy or a girl.

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 ÷ 9 = ☐	5 ÷ 1 = ☐	88 ÷ 11 = ☐
99 ÷ 9 = ☐	3 ÷ 1 = ☐	30 ÷ 5 = ☐
72 ÷ 8 = ☐	7 ÷ 7 = ☐	21 ÷ 3 = ☐
10 ÷ 5 = ☐	132 ÷ 11 = ☐	

Step 2 - cross out the sentence with each answer:

1. The villain spins a rusty sword, then waves a golden cutlass.
2. The villain swings on a long rope, then checks a silver compass watch.
3. The villain pulls the heavy sails, then drops a heavy iron anchor.
4. The villain blasts a loud cannon, then drops a heavy iron anchor.
5. The villain swings on a long rope, then waves a golden cutlass.
6. The villain reads an old paper map, then points a sharp bone hook.
7. The villain swings on a long rope, then points a sharp bone hook.
8. The villain pulls the heavy sails, then waves a golden cutlass.
9. The villain pulls the heavy sails, then feeds a sneaky parrot helper.
10. The villain reads an old paper map, then drops a heavy iron anchor.
11. The villain reads an old paper map, then checks a silver compass watch.
12. The villain blasts a loud cannon, then feeds a sneaky parrot helper.

TEACHER / PARENT

Answer Key

The Mystery of the Missing Golden Compass

Culprit: First Mate Molly

Map Reading · Iron Anchor · Pirate Girl · Bandana Braid · Sea Sickness

Trail: Start 21 → Clue 1 14 → Clue 2 11 → Clue 3 6 → Clue 4 4 → Clue 5 1

Clue 1 (Rounding): "THE VILLAIN DOES NOT HAVE A PARROT HELPER"

Round 16 to the nearest ten = 20 (T) · Round 9,496 to the nearest thousand = 9000 (S) · Round 27 to the nearest ten = 30 (R) · Round 84 to the nearest ten = 80 (N) · Round 714 to the nearest hundred = 700 (V) · Round 47 to the nearest ten = 50 (P) · Round 1,505 to the nearest thousand = 2000 (E) · Round 70 to the nearest ten = 70 (D) · Round 7,889 to the nearest thousand = 8000 (O) · Round 949 to the nearest hundred = 900 (I) · Round 94 to the nearest ten = 90 (A) · Round 4,195 to the nearest thousand = 4000 (L) · Round 174 to the nearest hundred = 200 (H)

Clue 2 (Addition): "THE LOST EARRING BELONGED TO A GIRL"

164 + 159 = 323 (T) · 72 + 136 = 208 (O) · 376 + 168 = 544 (B) · 83 + 127 = 210 (R) · 225 + 311 = 536 (S) · 344 + 374 = 718 (N) · 419 + 515 = 934 (H) · 352 + 360 = 712 (L) · 307 + 235 = 542 (I) · 396 + 273 = 669 (D) · 265 + 274 = 539 (A) · 140 + 113 = 253 (E) · 162 + 286 = 448 (G)

Clue 3 (Subtraction): "THE SWASHBUCKLER GOT VERY SEA SICK"

1030 - 254 = 776 (T) · 730 - 305 = 425 (C) · 675 - 286 = 389 (S) · 332 - 223 = 109 (I) · 664 - 400 = 264 (L) · 1235 - 393 = 842 (A) · 1188 - 349 = 839 (R) · 528 - 328 = 200 (W) · 606 - 297 = 309 (E) · 603 - 132 = 471 (K) · 437 - 175 = 262 (Y) · 675 - 326 = 349 (H) · 434 - 290 = 144 (O) · 676 - 325 = 351 (U) · 1247 - 371 = 876 (G) · 433 - 194 = 239 (B) · 1017 - 324 = 693 (V)

Clue 4 (Multiplication facts (1-12)): "A RED YARN FROM A BANDANA WAS LEFT"

10 × 7 = 70 (A) · 11 × 2 = 22 (N) · 7 × 12 = 84 (B) · 11 × 3 = 33 (M) · 5 × 9 = 45 (F) · 8 × 4 = 32 (O) · 11 × 12 = 132 (L) · 11 × 11 = 121 (E) · 6 × 12 = 72 (Y) · 7 × 1 = 7 (S) · 8 × 10 = 80 (T) · 1 × 2 = 2 (D) · 6 × 11 = 66 (R) · 12 × 12 = 144 (W)

Clue 5 (Division facts (1-12)): surviving statement is box 10 → First Mate Molly

36 ÷ 9 = 4 · 5 ÷ 1 = 5 · 88 ÷ 11 = 8 · 99 ÷ 9 = 11 · 3 ÷ 1 = 3 · 30 ÷ 5 = 6 · 72 ÷ 8 = 9 · 7 ÷ 7 = 1 · 21 ÷ 3 = 7 · 10 ÷ 5 = 2 · 132 ÷ 11 = 12