



Treasure +



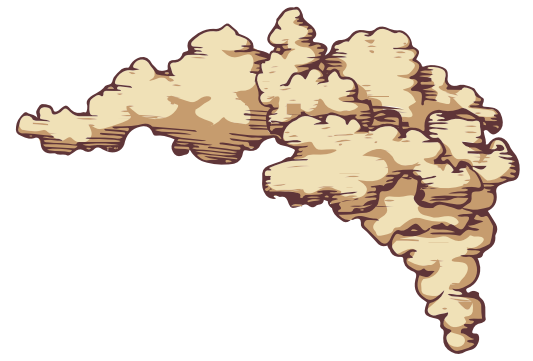
Skulls

Teacher's Guide

Grades 6 - 9

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1-855-966-8628
@wootmath





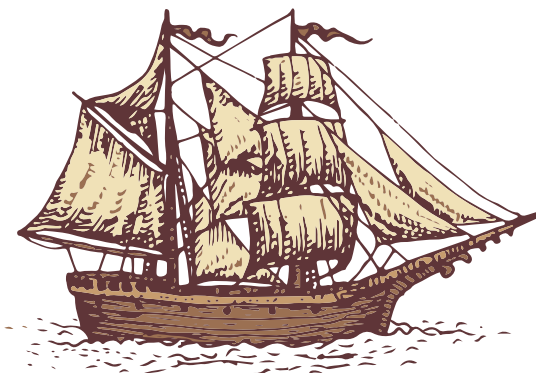
Location

An unidentified sinkhole (about 200 feet down) on the Island of Bones, leading to a series of underground caves and rivers (similar to the cenotes of the Yucatan peninsula). Unknown to you, also the entrance to the rival pirate gang's lair.

Characters

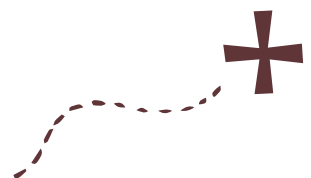
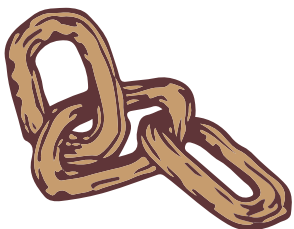
Elena Curnow - "The Magpie of the High Seas", the pirate captain who left you and several of your shipmates in the sinkhole for insubordination

Sadie "Swallowtail" Twynam - the rival pirate captain, with whom Curnow has an uneasy truce (but who secretly plans to betray your captain to the x government)





Explore the sinkhole -
Reveal that it is an entrance
to Swallowtail's lair -
Break in



 Solve for the pattern that will allow you to turn stones on the cavern wall without getting skewered by poison-tipped darts.

Slide 9

In these puzzles, arrange the pieces so the sum of the vertical tiles is equal to the sum of the horizontal tiles.



Solution:

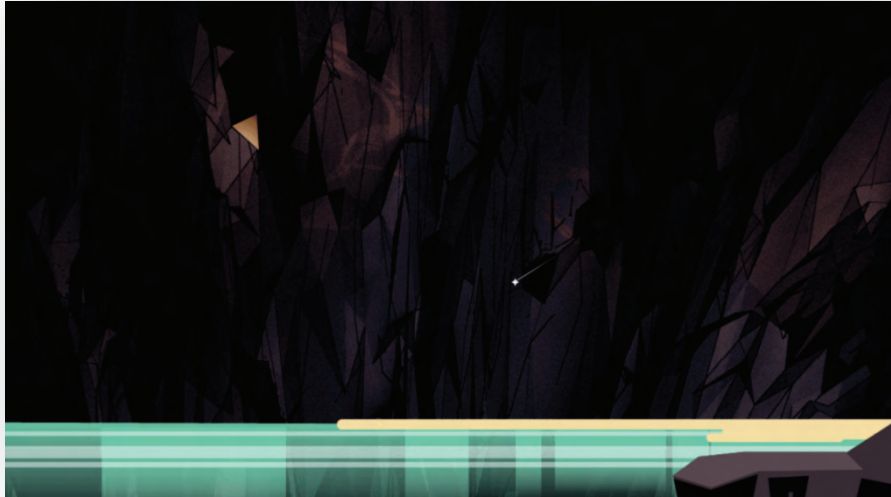
Vertical: 3 5 2

Horizontal: 4 5 1

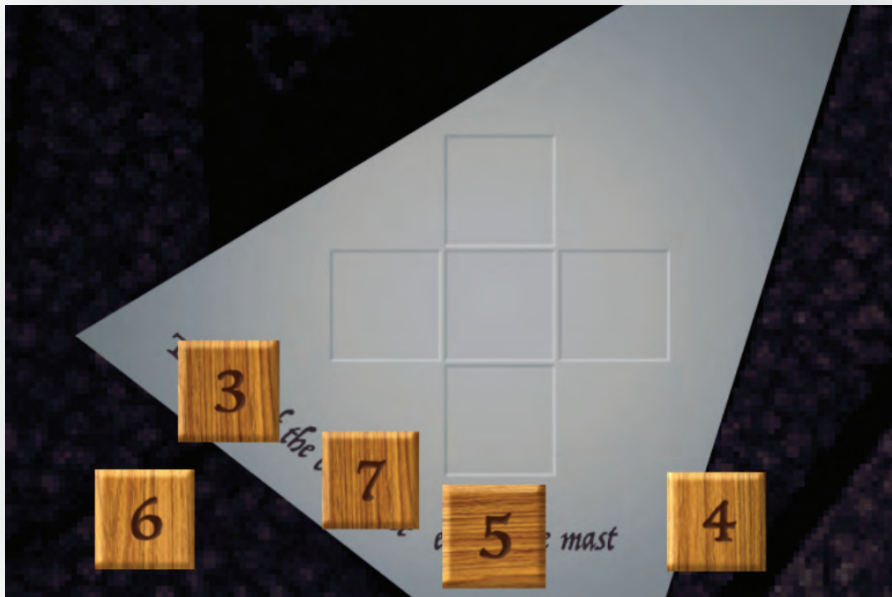


Slide 10

Students should find the small tan triangle and move it to “reveal” the puzzle.



Slide 11



Solution:

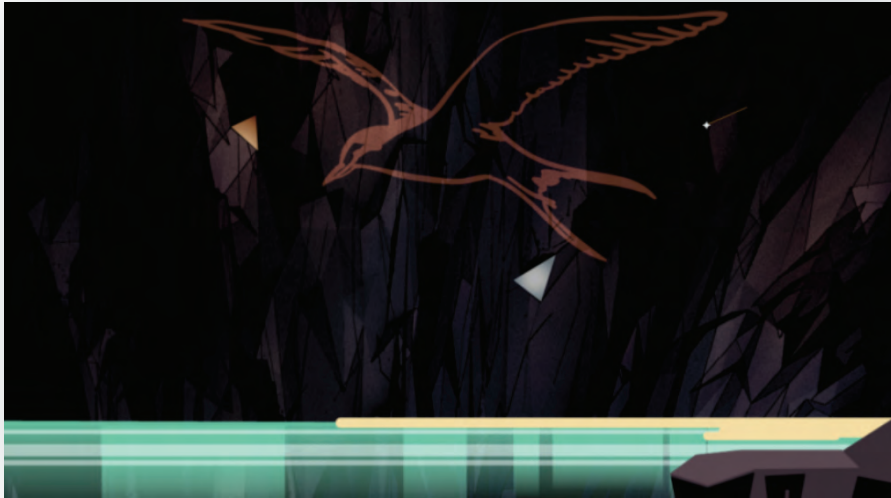
Vertical: 6 3 5

Horizontal: 7 3 4



Slide 12

Students should move the little white triangle to reveal the puzzle.



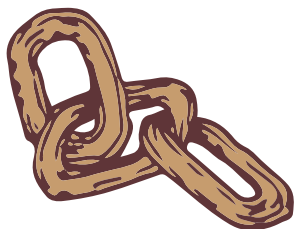
Slide 13



Solution:

Vertical: 2 -1 -4

Horizontal: 5 -1 -7

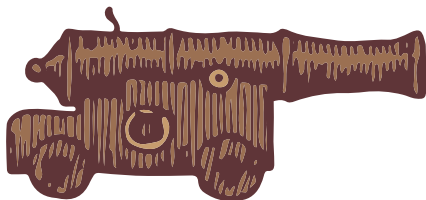


Slide 15

Arrange the pieces around the perimeter of the outlined swallowtail.



Solution:



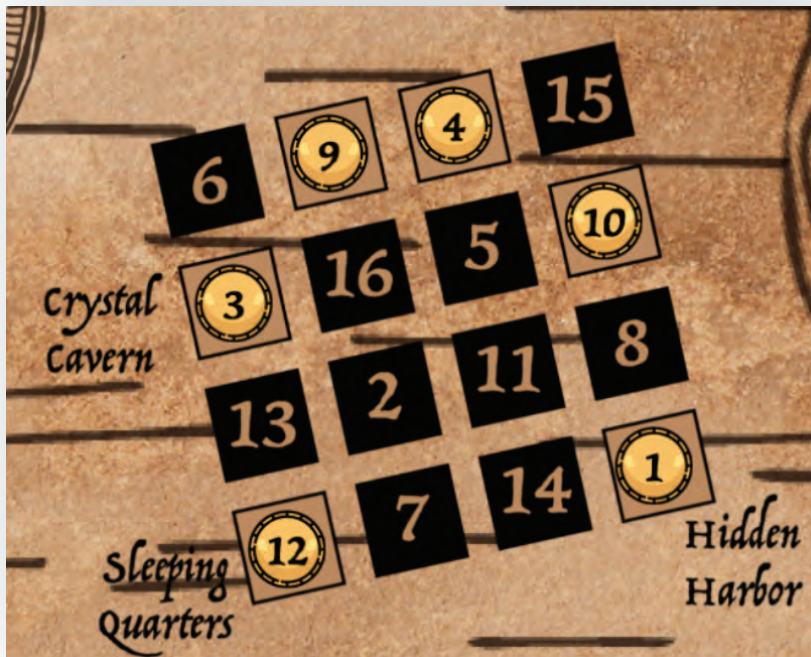
 Solve the code in order to read the map.

Slide 18

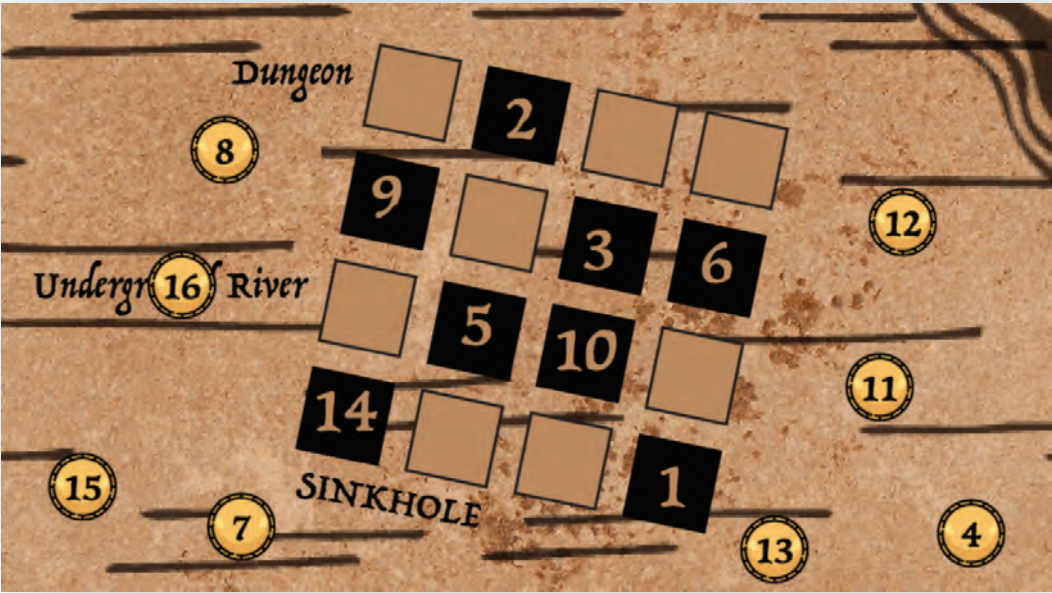
Complete the magic squares so that every row, column and diagonal have the same sum.



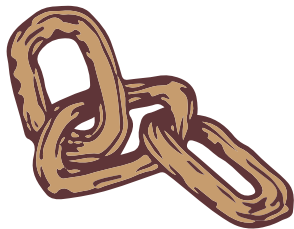
Solution:



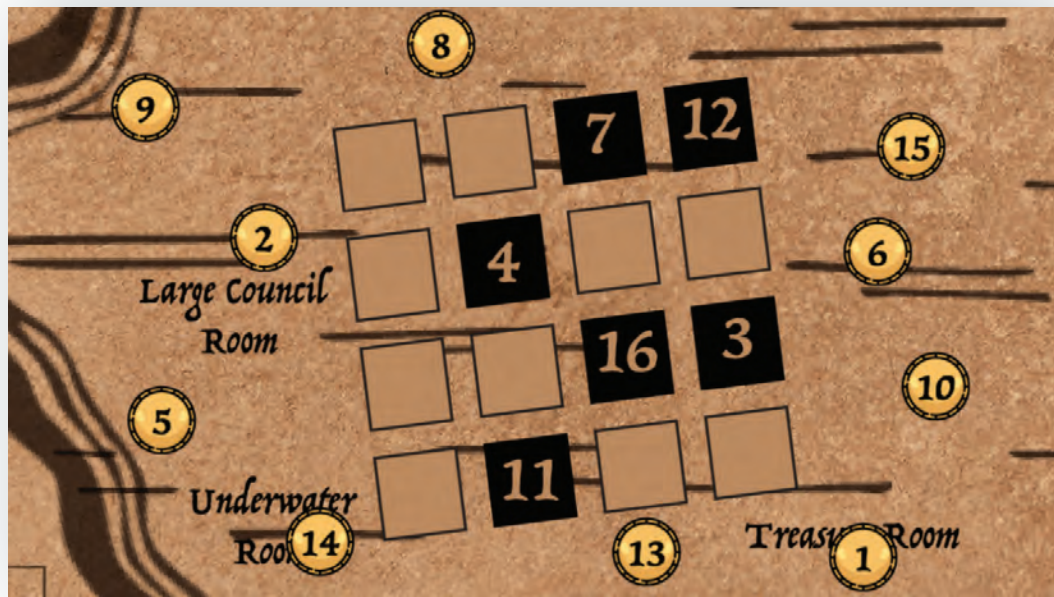
Slide 19



Solution:



Slide 20



Solution:



☠ While traveling down the underground river, select the correct number from the ring surrounding each equation in order to keep from drowning in the trap.

Slide 27

Position the numbers to make the equations true.



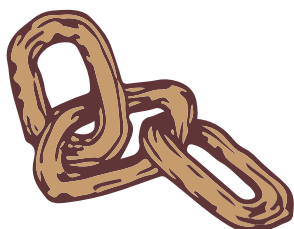
Solution:



Slide 28



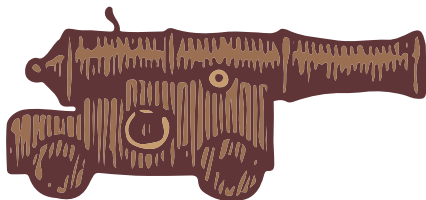
Solution:

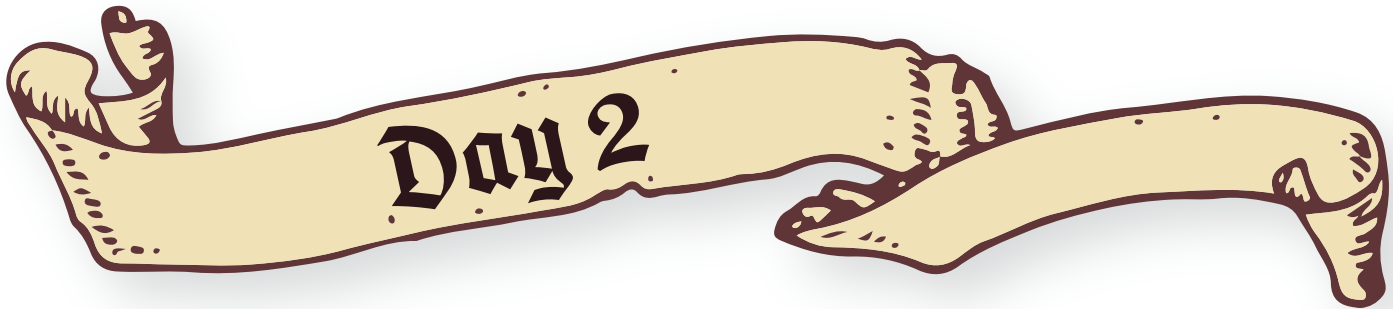


Slide 29

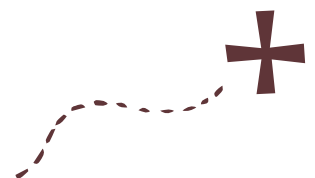
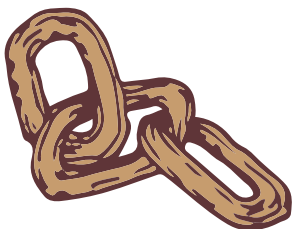


Solution:





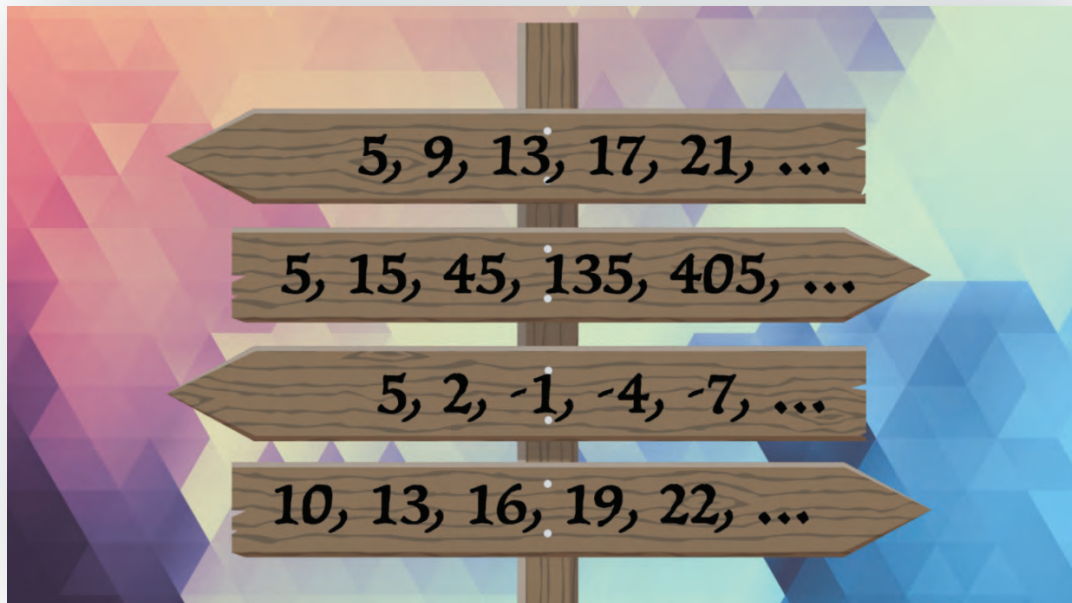
Attempt to exit the sinkhole
through the underground cave system
(while getting a token for your captain), -
Discover evidence of a plot



 Map the path to cross the Crystal Cavern without danger.

Slide 34

Students discuss which arrow section doesn't belong (there is a reason for every single one!) and then decide which way they want to go. There is help on "where to go" on the next slide.

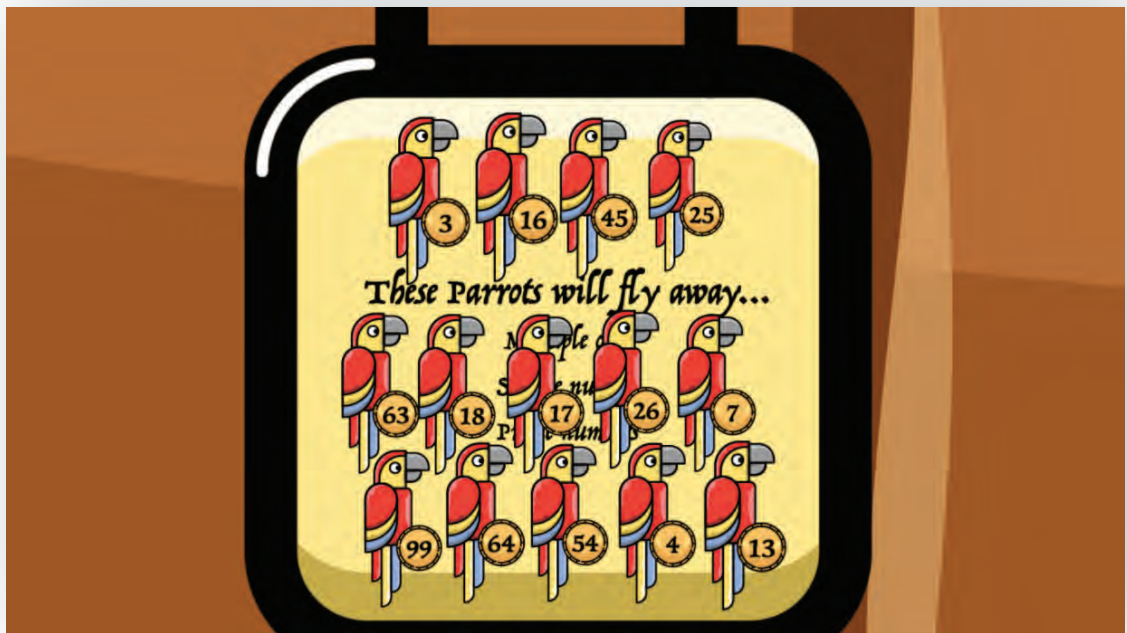


 Solve the code to enter the Treasure Room.

Slide 38

Determine which parrot is left after the following ones have flown away.

- 1) Parrots with a multiple of 9 fly away.
- 2) Square number parrots fly away.
- 3) Prime number parrots fly away.



Solution:

Last parrot is 26!

Prime: 3, 17, 7, 13

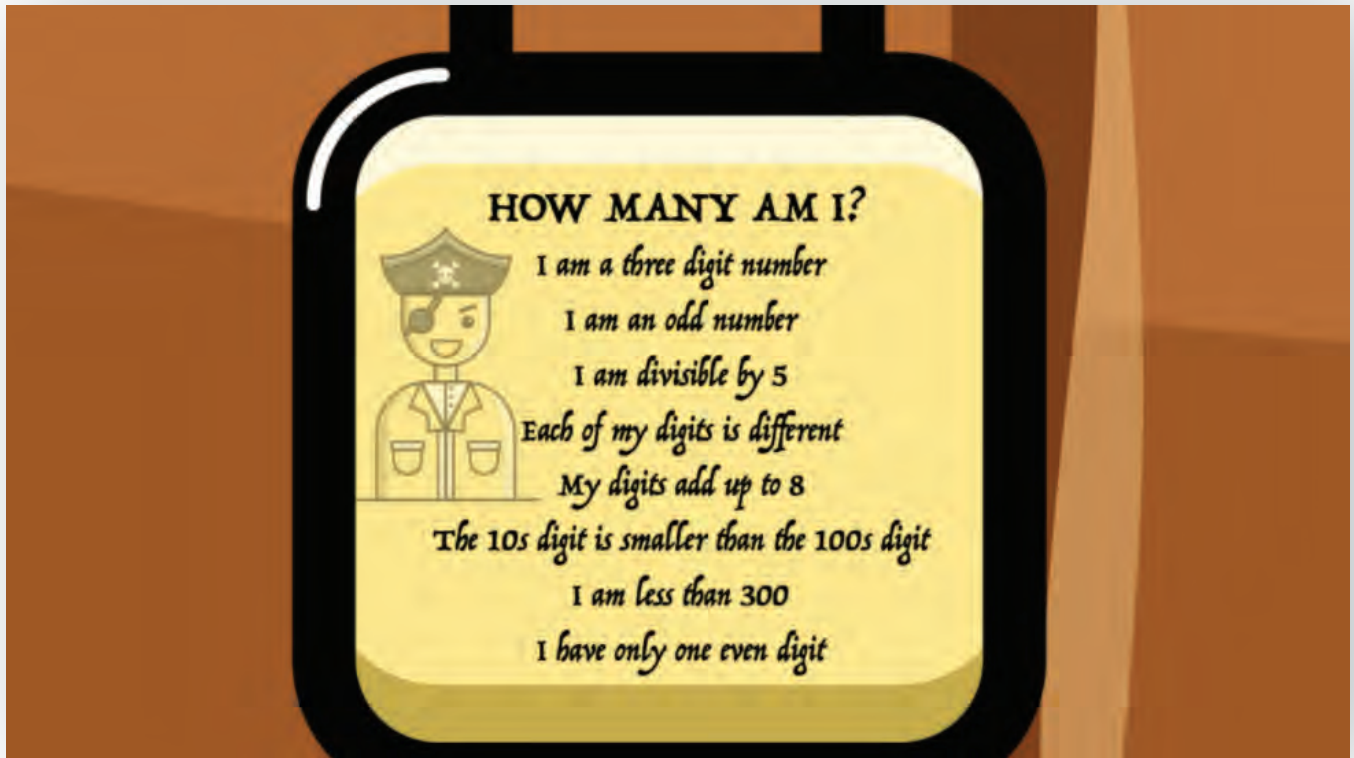
Square: 16, 25, 64, 4

Multiple of 9: 45, 63, 18, 99, 54

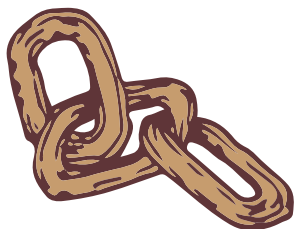


Slide 39

Answer the riddle.



Solution: 215

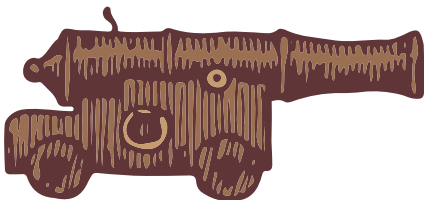


Slide 40

Answer the riddle.



Solution: E = 1
T = 2
N = 3
S = 4
TENTS = 12



☠ Calculate to free the treasure you choose for your captain.

Slide 4.1

Add to 25 in each box.

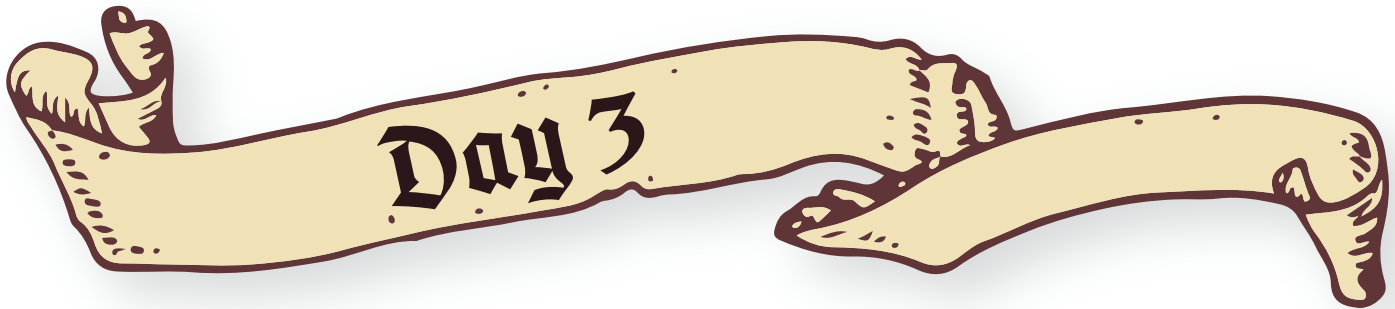


Solution:
MULTIPLE ANSWERS!

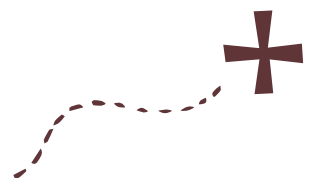
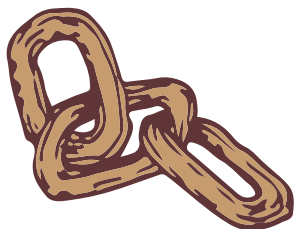
Examples:

$\{15, 10\}$ $\{13, 8, 4\}$ $\{11, 9, 2, 2, 1\}$
 $\{11, 10, 4\}$ $\{15, 8, 2\}$ $\{13, 9, 2, 1\}$
 $\{13, 11, 1\}$ $\{15, 8, 2\}$ $\{10, 9, 4, 2\}$





**Spy on Swallowtail's pirates -
Uncover the plot against your captain**



☠ Solve the way to get into the Council Chamber through a back entrance (map the underwater route, as hinted at in the decoded map).

Slide 50

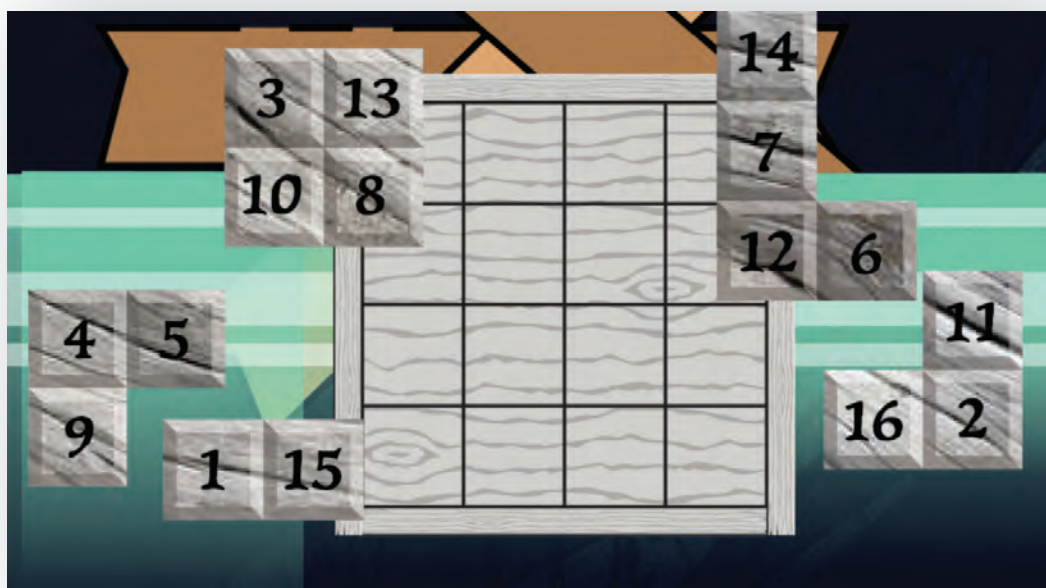
Complete the magic square by moving the pieces around so that each row, column and diagonal have the same sum -- 34.



Solution:



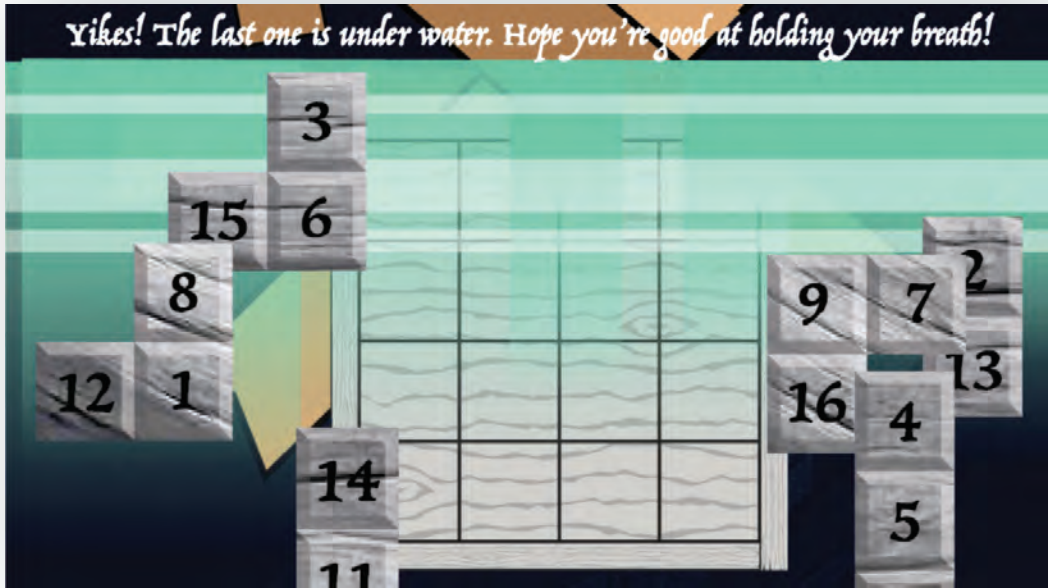
Slide 51



Solution:



Slide 52



Solution: Note that this one is a little ticky with multiple pieces that are the same shape, so it's important to make sure they fit and produce the right solution.



☠ Disengage the booby trap at the back of the Chamber.

Slide 55



Solution: Cube the lower number to get the higher number (same color jewels). $2^3 = 8$

Slide 56

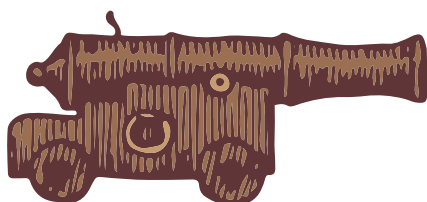


Solution: Square smaller number and divide by 2 to get larger number $6^2 = 36$, $36/2 = 18$

Slide 57



Solution: Divide larger number by 5, then subtract 3
 $310/5 = 62 - 3 = 59$



Slide 59

Solve the riddle.

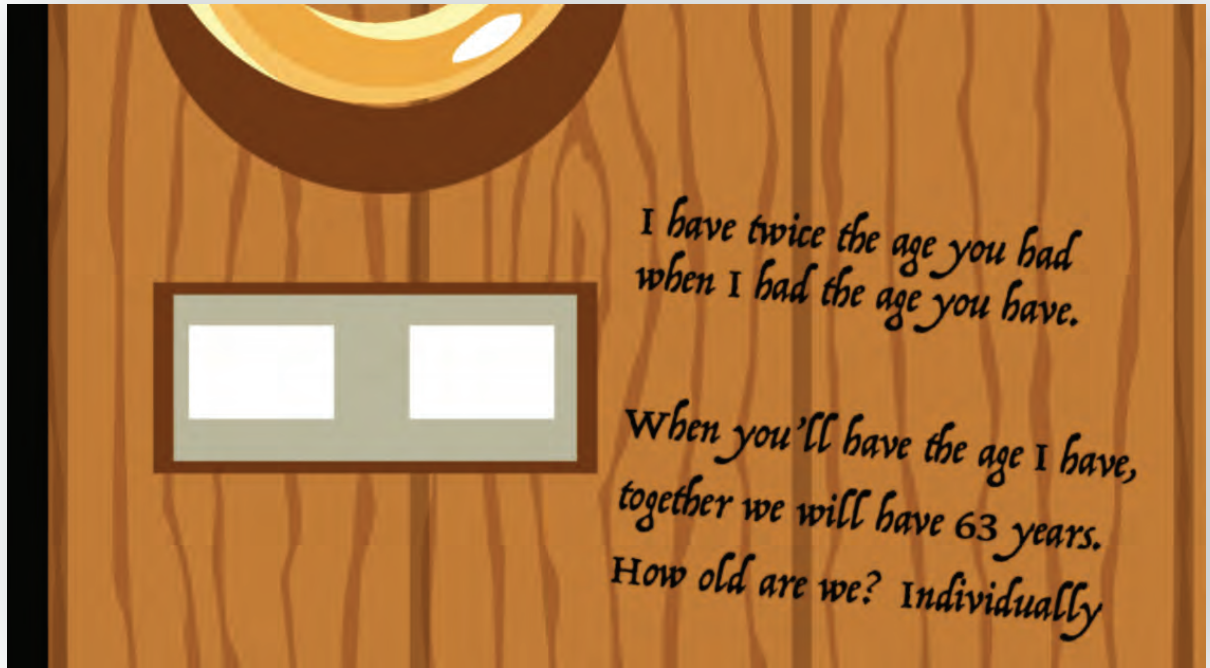


Solution: Multiple answers - one possible answer: 692703

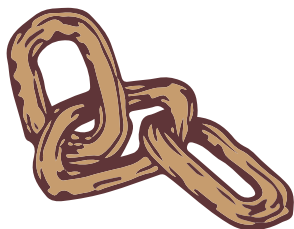


Slide 60

Solve the riddle

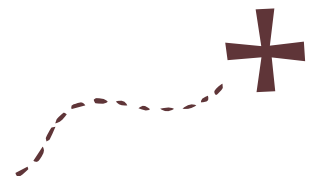


Solution: 28 and 21





Foil the plot -
Escape the sinkhole



☠ Solve the puzzle to open the doorway to the Hidden Harbor.

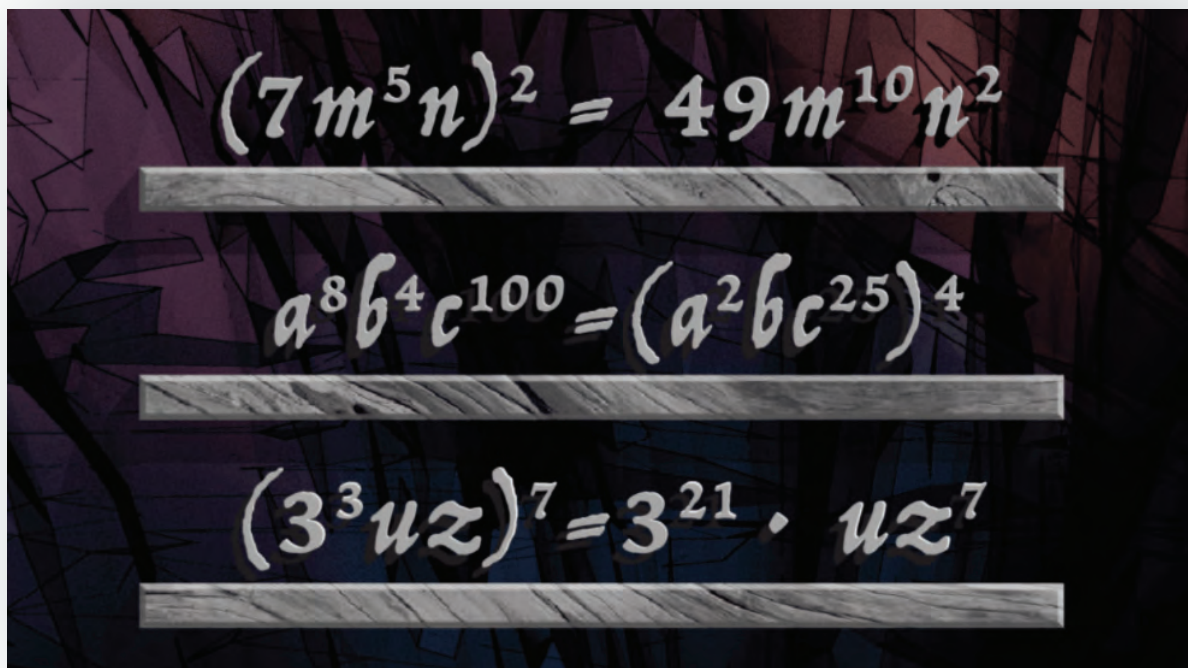
Slide 72

Determine the shelf that is false.



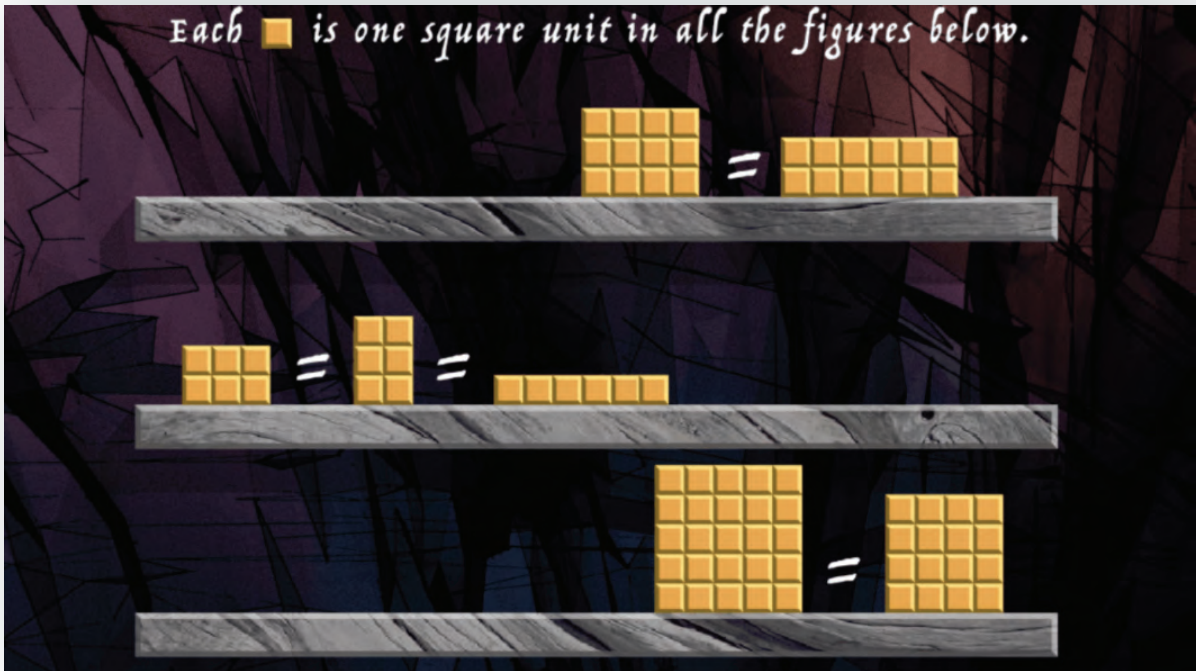
Solution: The first shelf is false.

Slide 73



Solution: The third shelf is false.

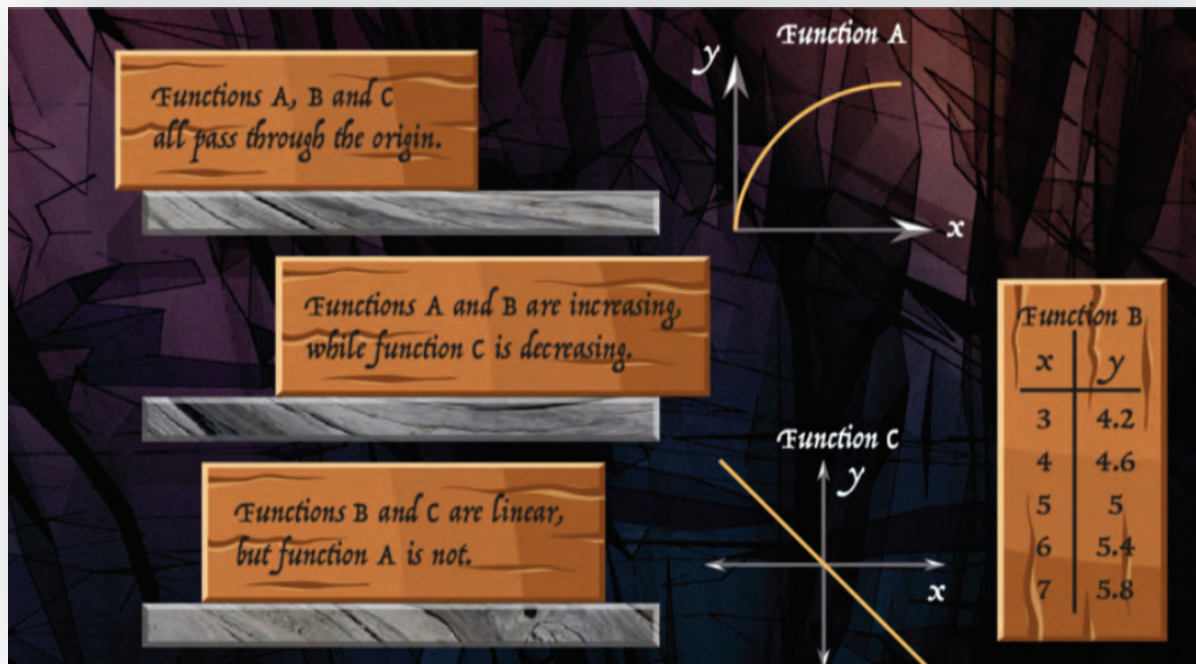
Slide 74.



Solution: The third shelf is false.

Slide 75

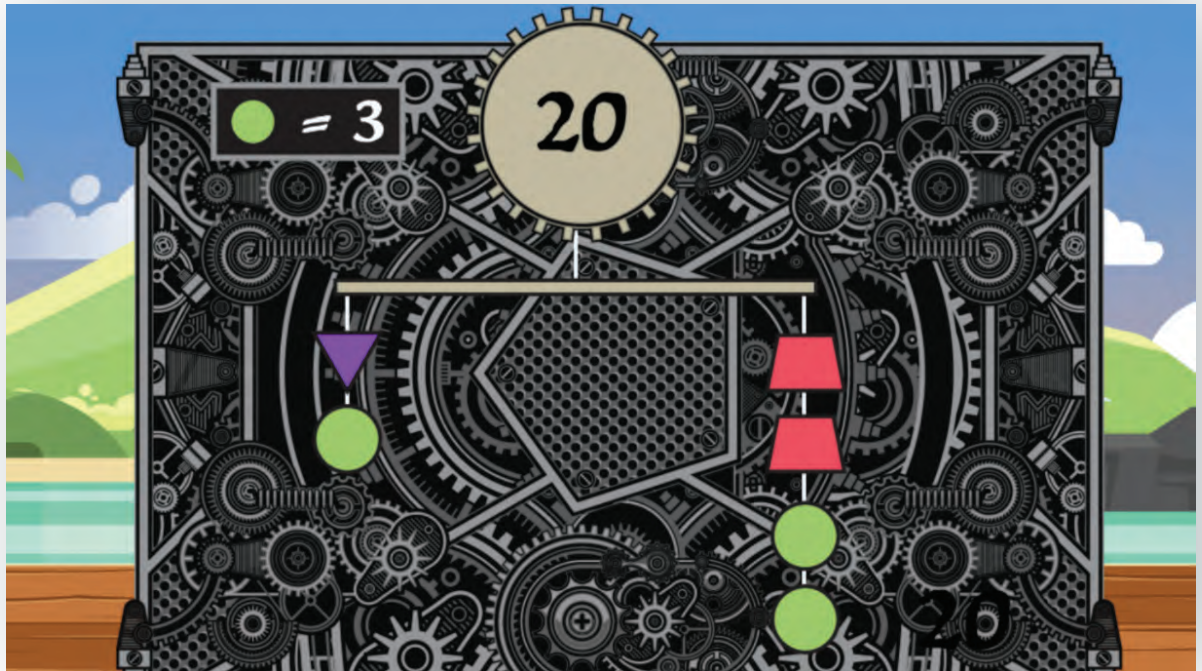
Lorem ipsum



Solution: The first shelf is false.

☠ At the Hidden Harbor, use a series of pulleys as an elevator system to reach the cage of the trained swallows, then solve the lock to open their cage and send a message of warning to your Captain.

Slide 78



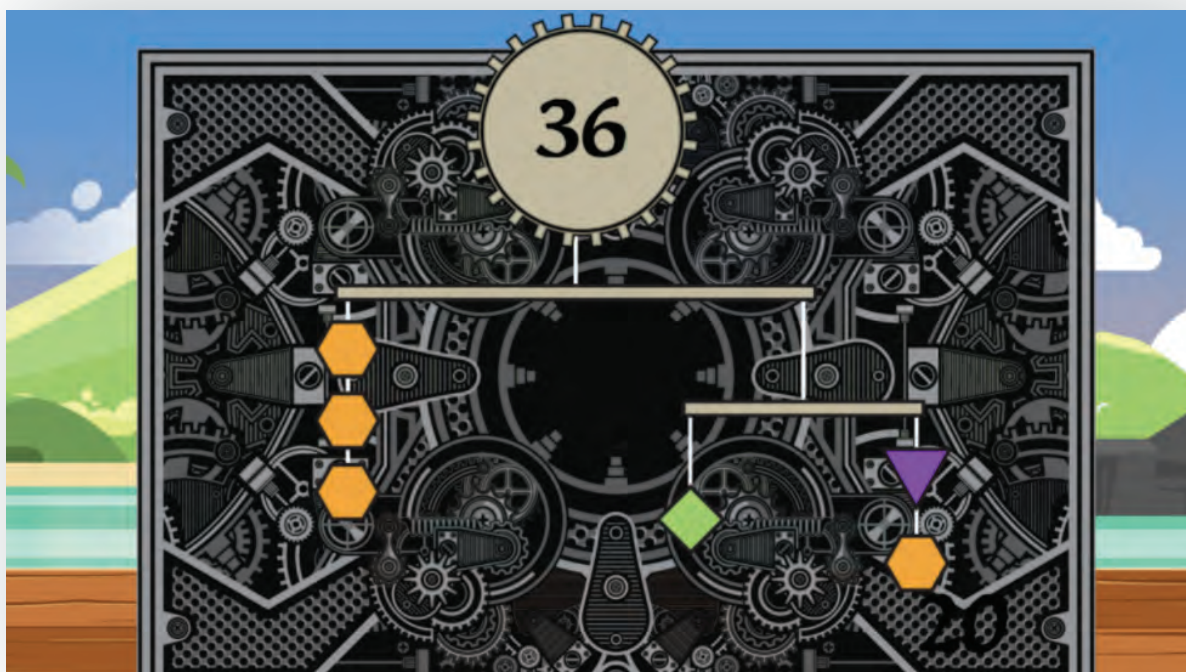
Solution:

Green Circle = 3

Purple Triangle = 7

Red Trapezoid = 2



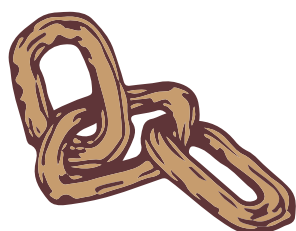


Solution:

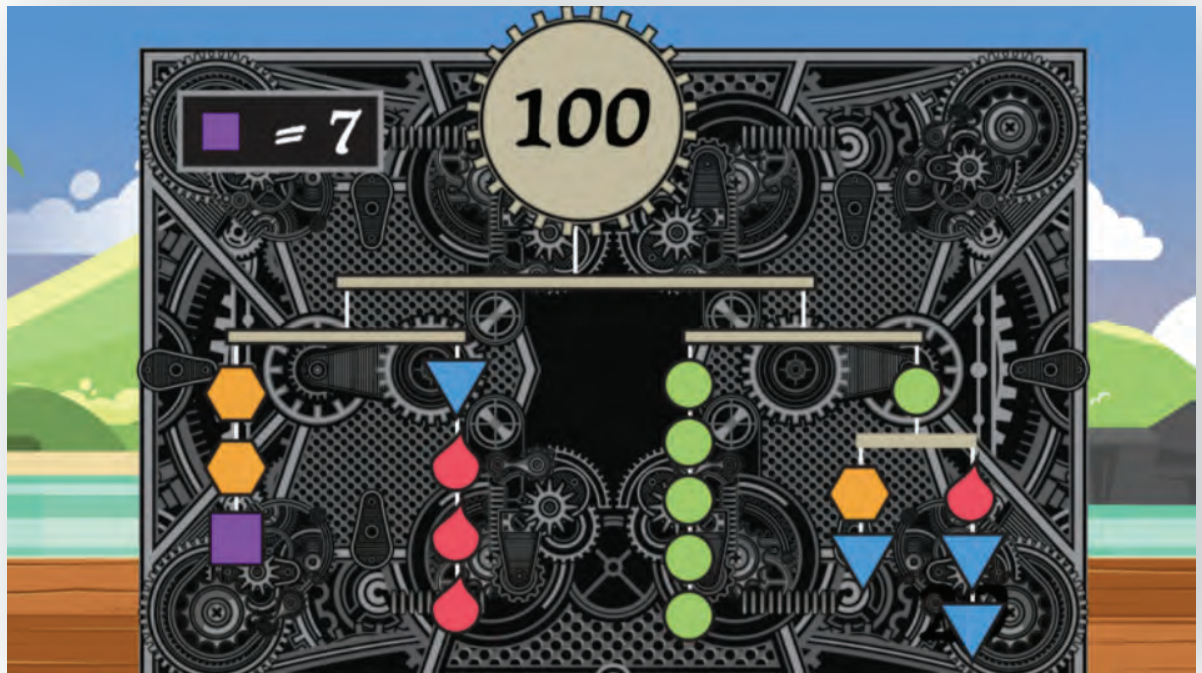
Orange Hexagon = 6

Green Diamond = 9

Purple Triangle = 3



Slide 80



Solution:

Orange Hexagon = 9

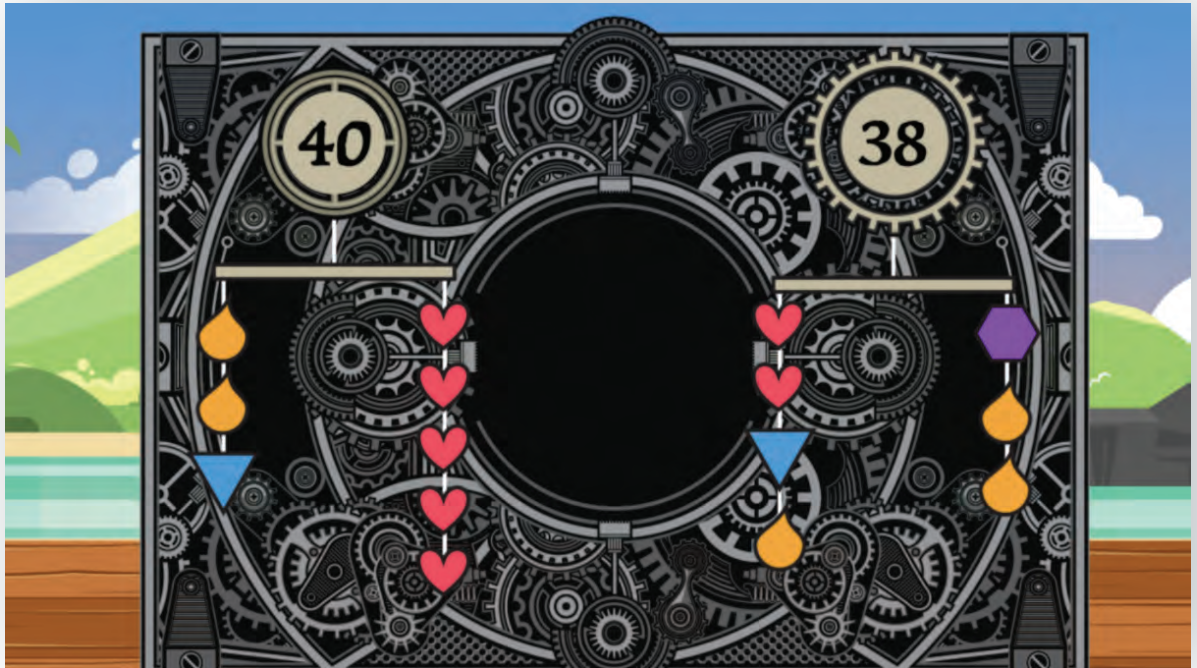
Blue Triangle = 1

Red Teardrop = 8

Green Circle = 5



Slide 81



Solution:

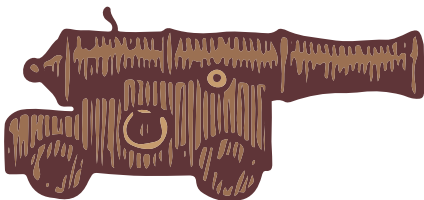
Orange Teardrop = 9

Blue Triangle = 2

Red Heart = 4

Purple Hexagon = 1

Hint: Using a system here is helpful. You can find hearts first and then set up a system to find the triangle and teardrop.

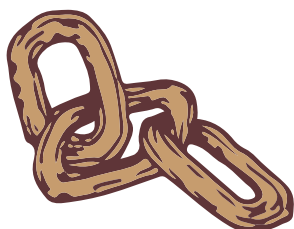


Slides 82/83

Students will need to move the scrolls around to find the other hidden ones. Then they will figure out the code and use it to translate the message.



Solution:



🏴‍☠️ Steal a boat and exit the Harbor without setting off the explosives at its mouth.

Slide 87

Using the numbers 1-8, arrange to have each horizontal and vertical line add to the middle number.



Solution:



Slide 88



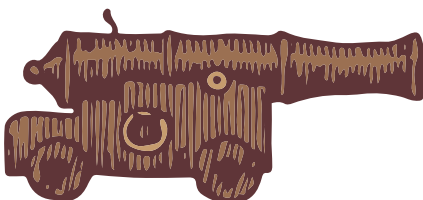
Solution:



Slide 89



Solution:



Slide 90



Solution:

