

Digital Schoolhouse Puzzle Page

"If I had an hour to solve a problem I'd spend 55 minutes thinking about the problem and 5 minutes thinking about solutions"

Albert Einstein

Welcome to the Digital Schoolhouse Puzzle Page: Crack the Code

On this paper, we will investigate a series of puzzles that can be used to promote Computational Thinking. This month we will crack the code at the start of the escape maze.

You are at the entrance of an escape maze with puzzles inside for you to solve. The only way forward is through a locked door with an electronic lock. The lock can be opened by entering a 9-digit combination code.

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On a piece of paper by the lock is the following clues about the code:

The only digits in the code are 1, 5, 6 and 8.
 The digit with the highest value is used the lowest number of times in the code.
 The digit with the lowest value is used the highest number of times in the code.
 The code is the same backwards and forwards.
 All consecutive digits are different.
 The last digit is even.

Answer:

9	1	5	1	8	1	5	1	9
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Linkage to Computer Science

This is an example of using deductive reasoning (logic) to solve the problem, which is the process of reasoning from one or more statements to reach a logic conclusion.

Solutions

3	1	8	9	2	7	4	5	6
4	6	5	8	3	6	3	1	8
7	2	6	7	1	2	6	7	8
8	3	9	6	7	5	1	2	8
9	6	5	8	3	2	7	4	9
7	2	8	9	1	4	3	5	6
3	1	7	2	9	6	4	8	5
9	8	2	4	5	3	6	7	1
5	4	6	1	8	7	9	3	2

Puzzle 60: (Hard, difficulty rating 0.66)

9	6	4	8	1	2	3	7	5
1	7	2	3	5	4	8	6	9
5	3	8	6	9	7	1	4	2
3	8	6	9	4	5	2	1	7
4	2	9	7	6	1	5	3	8
7	1	5	2	8	3	4	9	6
8	9	1	5	3	6	7	2	4
2	5	3	4	7	9	6	8	1
6	4	7	1	2	8	9	5	3

Puzzle 59: (Medium, difficulty rating 0.51)

7	9	2	4	8	1	6	3	5
1	1	6	2	7	5	3	4	8
8	4	8	7	2	7	4	8	1
9	6	2	6	9	3	5	5	6
4	5	1	7	3	6	2	8	9
2	8	6	1	5	9	6	4	3
9	7	3	8	2	4	5	1	6
5	2	7	6	1	8	3	9	4
3	1	4	5	9	7	8	6	2
8	6	9	2	4	3	1	7	5

Puzzle 58: (Easy, difficulty rating 0.39)

Puzzle 58: Easy

			4		7	5
	1		5		6	
			6	8		4
9			2	4		6
2	8				3	7
4			7	3		9
1			9	2		
	4			5	2	
7	9			8		

Puzzle 59: Medium

			4	1		
				9	6	7
	2	9			4	8
		4		3		6
9	3	6			8	5
7			5		9	
1	7				5	6
3	2	6				
			3	1		

Puzzle 60: Hard

	4			8		3	2
	8		4				
3	1			9	6		5
7						5	
1		5				7	9
	3						8
8			5	4		6	7
					8		9
6	5			2			1