Tactical Escape: A Great Math Challenge

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Math Escape Room Guidelines

- You have **forty minutes** working as a team to "escape" the room.
- The code word is marked with a hashtag to help you identify it (i.e. #CODEWORD).
- You must solve the clues to find the values that you will substitute in for the letters of the code word.
- Do not remove clues from their location unless instructed to do so. Record clues on whiteboards.
- Use the whiteboards to solve problems.
- Anything taped off with a red X is off limits.
- You get up to **three hints**, but must agree unanimously to use them.
- You must dance as a team to earn a hint (whip nae nae, running man, macarena).
- You get **three attempts to solve** the puzzle with the numeric code to "escape" the room.

Good luck… and remember, the keys to success are communication and collaboration.

Math Escape Room Key

REASON: 2-3-6-8-0-7

Code word: REASON
Place #REASON on the side of a ceiling light

R: Ms. LeGear magnet on the small whiteboard on the left side of the West side of the room
Padlock combination is located on the back of the Ms. LeGear magnet
"Three * Two * Five"
Unlock padlock to open cabinet
Message located on the inside of the left cabinet door
"R = the number of tiles remaining"
Hanging inside the cabinet is a poster of The Big Bang Theory
Message on the back of the poster
"$(3x^3 + 8x^2 - x - 8) \div (3x + 5)$"
R = 2

E: Message located on west side of Ms. Jones' desk
"

x	0	2	3	5
y	E			

"

Star located on the "Nerd Herd" picture on the bulletin board located on the left side of the East wall
Message on the back of the star
"One more than the number of teachers in the 'nerd herd'" (So  = 12)
Message on the back of the lion poster
"The number of hours in a day" (So  = 24)
Message on the back of the turtle magnet
"96" (So  = 96)

E = 3

A: Message located on the back of Ms. LeGear's desk chair

$$“9^{\spadesuit} = 27^{\blacklozenge}”$$

Deck of cards (in the box) located on Ms. LeGear's desk
The cards: Ace of spades and the four of diamonds are marked with highlighter
(So $\spadesuit = A$ and $\blacklozenge = 4$)
A = 6

S: Message located on the cover of an Algebra 1 textbook located on the bookshelf
"The graph of $y = |x|$ is on the move"
Message located on the bottom of the VCR of the TV
"Shift the graph left 2 units"
Message located in the coffee cup on Ms. LeGear's desk
"Shift the graph up 5 units"
Message on the whiteboard on the East side of the room under Notes/Reminders
"To sharpen your pencil, use this tool. To sharpen your mind, start with the clue inside."
Message located inside the pencil sharpener
"A point on the graph that was shifted twice is $(1, S)$"
S = 8

O: Encoded message on the inside of the left side of the left bookshelf
"EPHL MHOHE HL YIE HYVSGMCM HY EPC YHDLE LCWCYECCY MHOHEL IN JH XGE HE HL EPC WKSGT FIG YTTM EI JGE HY NID EPC SCEECD I HY EPC VIMC BIDM"
Message on back of frog magnet
"Open the laptop that is 'lit'"

Located on the black laptop is a picture of a lightbulb
On top of the keys on the keyboard are pieces of paper with different letters: QWERTY → ABC
The screen has an open, blank word document
Students type encoded message to see this message on the screen:
"THIS DIGIT IS NOT INCLUDED IN THE FIRST SEVENTEEN DIGITS OF PI BUT IT IS THE VALUE YOU NEED TO PUT IN FOR THE LETTER O IN THE CODE WORD"
The Pi poster is on the door located on the west side of the room for students to check the digits of Pi
O = 0

N: Message under the bear on a swing behind Ms. Jones' desk

"This riddle is under the swing of a bear. For your next clues, look under tables and chairs."

Clue under the table of Team Ladybug

Figure 1

Clue under the SW chair of Team Giraffe

Figure 2

Clue under the table of Team Elephant

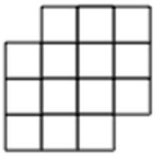

Figure 3

Clue under the NW chair of Team Fox

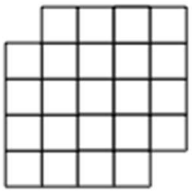

Figure 4

Clue under the NE chair of Team Lion

"There are 62 tiles in figure N"

N = 7