



# STOP THE CLOCK!

Each puzzle results in a code word or words, which must be entered to stop the clock.

The numerals on a digital clock are each composed of some combination of seven line segments, as shown below.



A. Which digits accurately name the number of segments they contain? (Ascending order)

A = \_\_\_\_\_

B. When 2 turns to 3, one segment turns on and another turns off, for a total of 2 changes. During the 10 transitions through all the digits above (including 9 to 0), there are a total of 30 segment changes. Can you complete the arrangement below using all ten digits in such a way that the 10 transitions (including from last to first) require only 16 segment changes?

B = 00000000782

C. Addition and subtraction work differently for digital characters. For example:



Note: A - B results in A with overlaps removed.

Fill in the equations below so that each digit is used exactly once. Three of the digits are given. The solution to this section is the 10 digits in the order that they appear in the completed equations:

$$2 + 8 = 8 \quad 8 + 3 = 8 \quad 8 - (0 - 8) = 8$$

C = 2888388088

D. Now use what you learned about digital addition and subtraction to solve the following equations to decode D.

$$(C1 + B7) - (B1 - C6) = D1$$

$$((B5 + B9) - A2) + C7 = D2$$

$$B8 + C4 = D3$$

$$C3 - (B9 - C8) = D4$$

$$(C7 + C8) - (B4 - A3) = D5$$

$$B9 + A1 = D6$$

D = 888888

(Code Word(s))

The internet won't help you on this one. Just take a look from a different perspective!



## Play Sheet

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