

CS50 presents

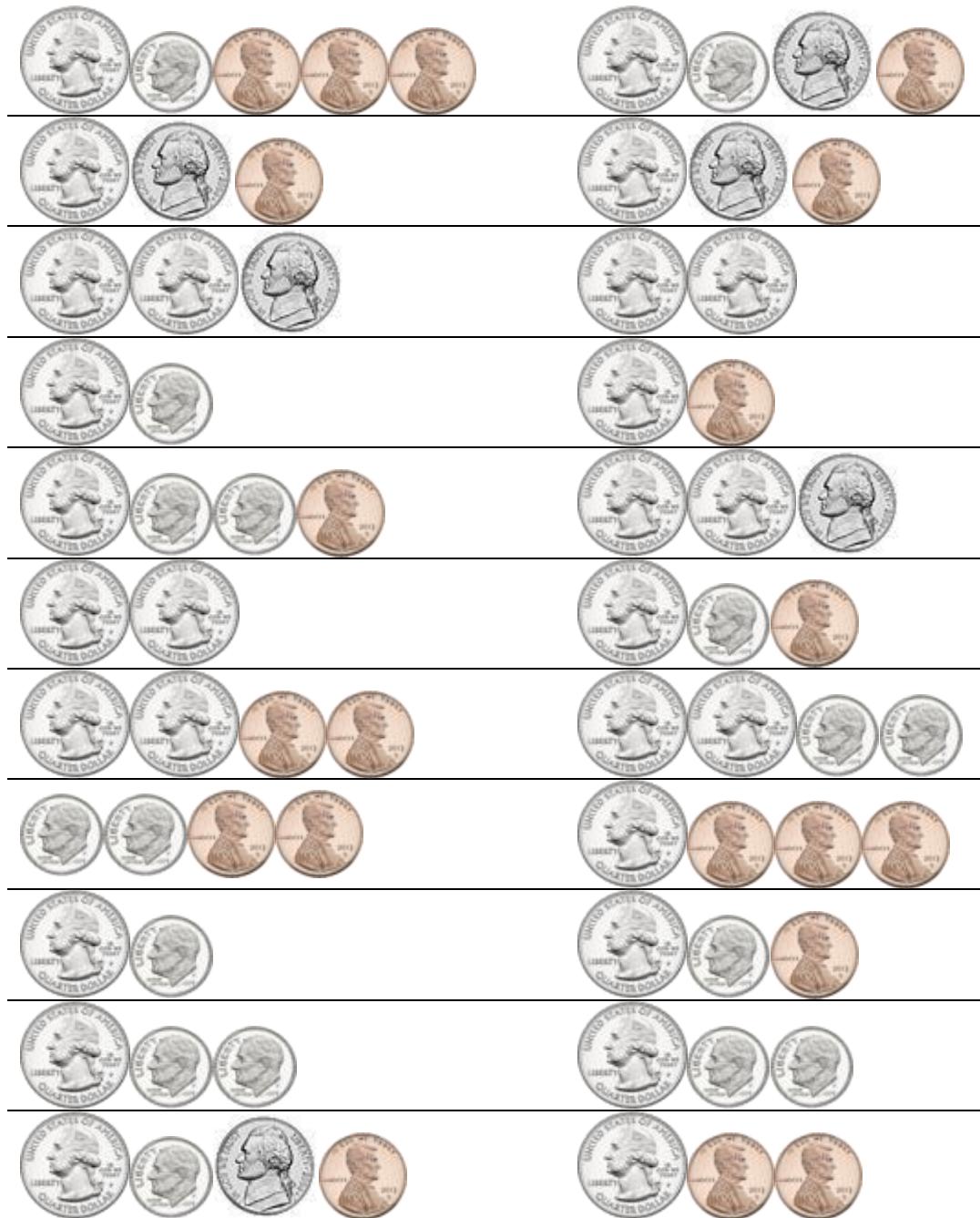
# CS50x Puzzle Day 2019

*with special thanks to our friends at Facebook*

**March 29 – April 1, 2019**

- This packet contains 11 puzzles, each of which is independent of the others.
- The answer to each puzzle is a single word or name in English, unless otherwise specified.
- You may use the Internet and any other resources at your disposal.
- You are encouraged (but not required) to work on a team with 1, 2, or 3 classmates or friends, either in person or online.
- Have fun and good luck!

## #1: Don't Be Greedy



Answer: \_\_\_\_\_

## **#2: It's About the Journey, not the Destination**

### **Itinerary:**

Day 1: Start in Lithuania  
Day 3: Arrive in Slovakia  
Day 9: Arrive in Serbia  
Day 16: Arrive in Turkey  
Day 20: Arrive in Romania  
Day 25: Arrive in Poland  
Day 31: Arrive in Luxembourg  
Day 36: Arrive in Spain  
Day 39: Arrive in Germany  
Day 40: Arrive in Belarus  
Day 45: Arrive in Georgia  
Day 46: Arrive in Syria  
Day 50: Arrive in Egypt  
Day 51: Arrive in Niger

Answer: \_\_\_\_\_

### #3: Two Strikes

salesmen waitress referee attendant rabbi ballerina

---

ghost abhor forty almost biopsy spoon

---

twisted wrote bookend clasping baker chair

---

chains because blackbird sainted taxman misery

---

behind sprint blotch plenty cranky froths

---

adviser flushed replicas voyager rations matured

---

Answer: \_\_\_\_\_

## #4: Scheduling Conflicts

NEXT TRAIN TO...

<b>Burlington</b>	11:00
<b>Cranbrook</b>	3:50
<b>Grand Forks</b>	8:05
<b>Halifax</b>	4:55
<b>Kingston</b>	2:40
<b>Moose Jaw</b>	12:45
<b>North Bay</b>	7:35
<b>Pickering</b>	6:45
<b>Quebec</b>	10:40
<b>Richmond</b>	1:00
<b>Saint Lazare</b>	5:10
<b>Vancouver</b>	9:30
<b>Winnipeg</b>	8:50

Answer: \_\_\_\_\_

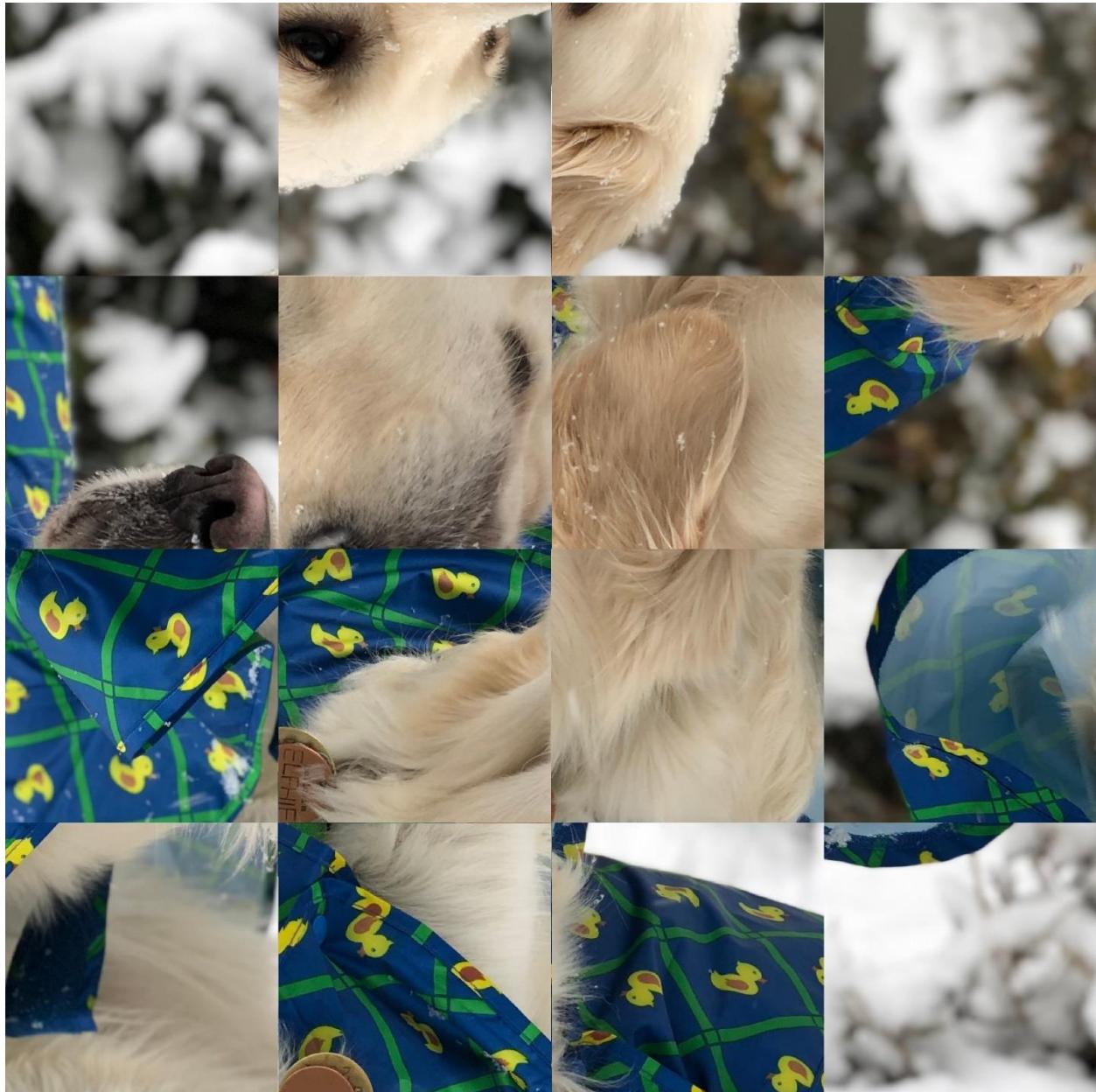
## #5: Hybridice

THE RULES ARE STRAIGHTFORWARD ONCE YOU KNOW THEM

$$\begin{array}{rcl}
 \begin{array}{c} \text{purple} \\ \text{dice} \end{array} & + & \begin{array}{c} \text{purple} \\ \text{dice} \end{array} = \begin{array}{c} \text{purple} \\ \text{dice} \end{array} \\
 \begin{array}{c} \text{orange} \\ \text{dice} \end{array} & - & \underline{\quad} = \begin{array}{c} \text{yellow} \\ \text{dice} \end{array} \\
 \begin{array}{c} \text{blue} \\ \text{dice} \end{array} & \times & \begin{array}{c} \text{yellow} \\ \text{dice} \end{array} = \begin{array}{c} \text{green} \\ \text{dice} \end{array} \\
 \begin{array}{c} \text{black} \\ \text{dice} \end{array} & \div & \underline{\quad} = \begin{array}{c} \text{blue} \\ \text{dice} \end{array} \\
 \begin{array}{c} \text{green} \\ \text{dice} \end{array} & + & \begin{array}{c} \text{red} \\ \text{dice} \end{array} = \underline{\quad} \\
 \begin{array}{c} \text{purple} \\ \text{dice} \end{array} & - & \begin{array}{c} \text{red} \\ \text{dice} \end{array} = \begin{array}{c} \text{blue} \\ \text{dice} \end{array} \\
 \begin{array}{c} \text{red} \\ \text{dice} \end{array} & \times & \begin{array}{c} \text{blue} \\ \text{dice} \end{array} = \underline{\quad} \\
 \begin{array}{c} \text{orange} \\ \text{dice} \end{array} & \div & \begin{array}{c} \text{red} \\ \text{dice} \end{array} = \begin{array}{c} \text{red} \\ \text{dice} \end{array} \\
 \hline
 & + & \begin{array}{c} \text{blue} \\ \text{dice} \end{array} = \begin{array}{c} \text{green} \\ \text{dice} \end{array} \\
 \begin{array}{c} \text{black} \\ \text{dice} \end{array} & - & \begin{array}{c} \text{orange} \\ \text{dice} \end{array} = \begin{array}{c} \text{blue} \\ \text{dice} \end{array} \\
 \begin{array}{c} \text{green} \\ \text{dice} \end{array} & \times & \begin{array}{c} \text{green} \\ \text{dice} \end{array} = \begin{array}{c} \text{green} \\ \text{dice} \end{array} \\
 \begin{array}{c} \text{purple} \\ \text{dice} \end{array} & \div & \begin{array}{c} \text{red} \\ \text{dice} \end{array} = \underline{\quad} \\
 \begin{array}{c} \text{blue} \\ \text{dice} \end{array} & + & \begin{array}{c} \text{orange} \\ \text{dice} \end{array} = \begin{array}{c} \text{black} \\ \text{dice} \end{array} \\
 \begin{array}{c} \text{black} \\ \text{dice} \end{array} & - & \underline{\quad} = \begin{array}{c} \text{yellow} \\ \text{dice} \end{array} \\
 \hline
 & \times & \begin{array}{c} \text{yellow} \\ \text{dice} \end{array} = \begin{array}{c} \text{orange} \\ \text{dice} \end{array} \\
 \hline
 \begin{array}{c} \text{black} \\ \text{dice} \end{array} & \div & \begin{array}{c} \text{yellow} \\ \text{dice} \end{array} = \begin{array}{c} \text{purple} \\ \text{dice} \end{array}
 \end{array}$$

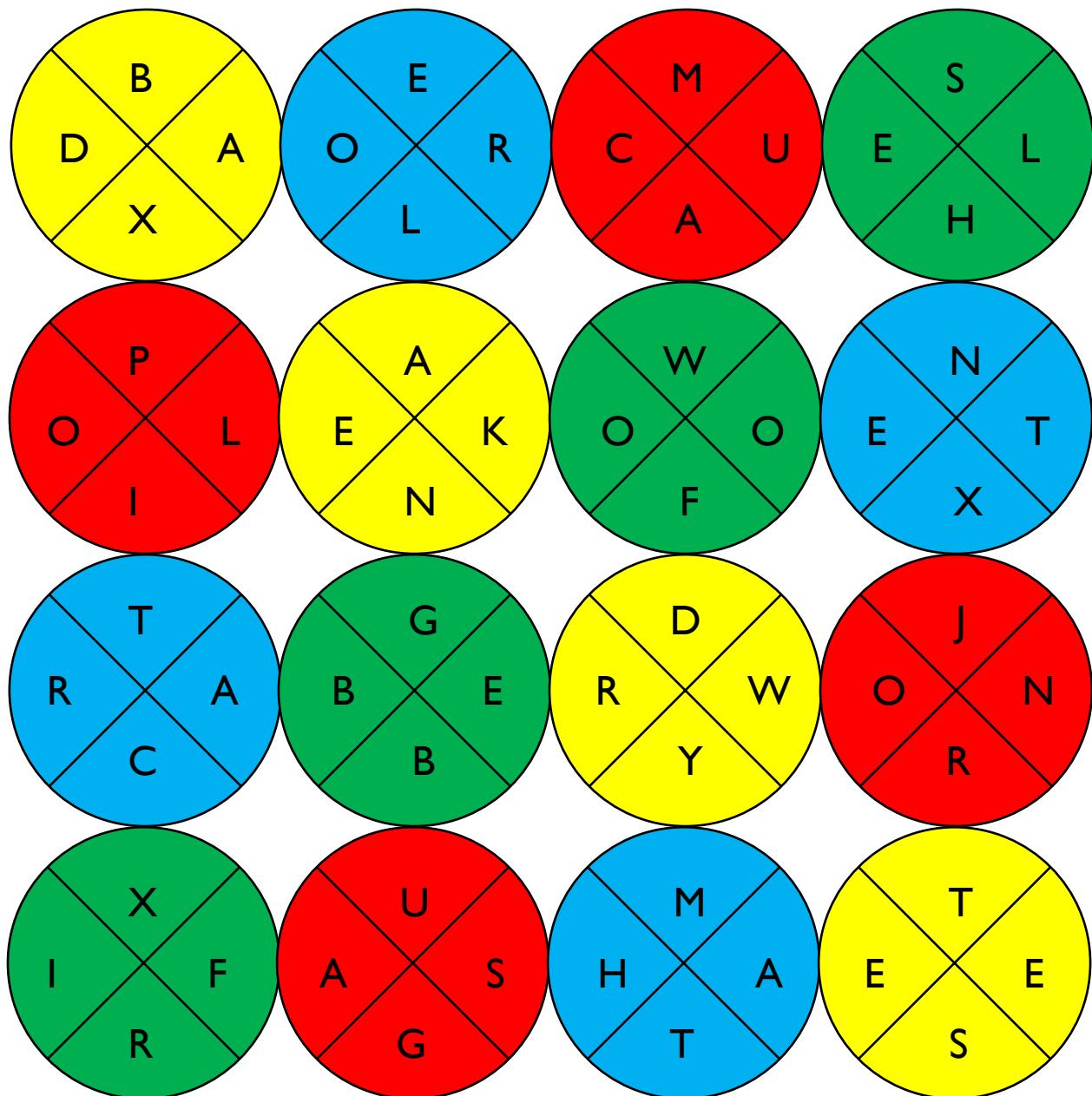
Answer: \_\_\_\_\_

## #6: A Few Degrees Above Zero



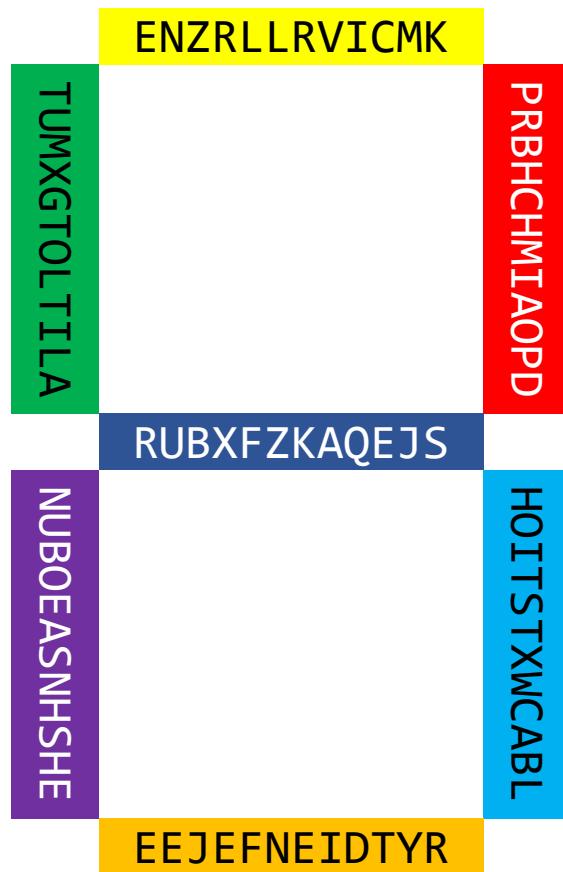
(continued on next page)

(continued from previous page)



Answer: \_\_\_\_\_

## #7: Segments



*Decoration Day*   
*World Cancer Day*   
*Independence Day*   
*Guy Fawkes Day*   
*Star Wars Day*   
*Liberation Day*

*Armed Forces Flag Day*   
*Peace Day*   
*Flag Day*   
*Independence Day*   
*Ancestry Day*   
*Unity Day*

Answer: \_\_\_\_\_

## #8: Mathmoji

*The trouble with emoji  
and why they're sure to vex  
Is each emoji's its own digit  
But the product should be hex*

$$\begin{array}{r} - \\ \begin{array}{ccccc} \text{🐟} & \text{🍿} & \text{🐠} & \text{❤️} & \text{🔥} \\ \text{🍿} & \text{💩} & \text{🐟} & \text{🍗} & \text{👤} \\ \hline \text{🎥} & \text{🐟} & \text{🍿} & \text{😊} & \end{array} \end{array} \quad \begin{array}{r} - \\ \begin{array}{ccccc} \text{🍗} & \text{⚽} & \text{💩} & \text{🍿} & \text{🍦} \\ \text{😂} & \text{💩} & \text{💩} & \text{👤} & \text{❤️} \\ \hline \text{🐟} & \text{🔥} & \text{🎥} & \text{👤} & \end{array} \end{array}$$

Answer: \_\_\_\_\_

## #9: Finest Flicks

*I really could use a multilingual, web-based, free encyclopedia based on a model of openly editable and viewable content to help with this.*

- M. *The Vibrations of Melodies and Harmonies*
- M. *More than a Decade Subjugated*
- M. *Address by a Sovereign*
- D. *Not Excused*
- Y. *An Alluring Intellect*
- Y. *Not a Nation for Elderly Guys*
- D. *Sick British Person*
  
- Y. *Substantially-Resourced Infant*
- M. *Those Who Left*
- Y. *Verdant Volume*
- M. *Courageous Soul*
- D. *Enamored Playwright William*
- D. *Oakley's First Name Corridor*
- D. *Virtuoso*
- D. *Not in the Second Largest Continent*

Answer: \_\_\_\_\_

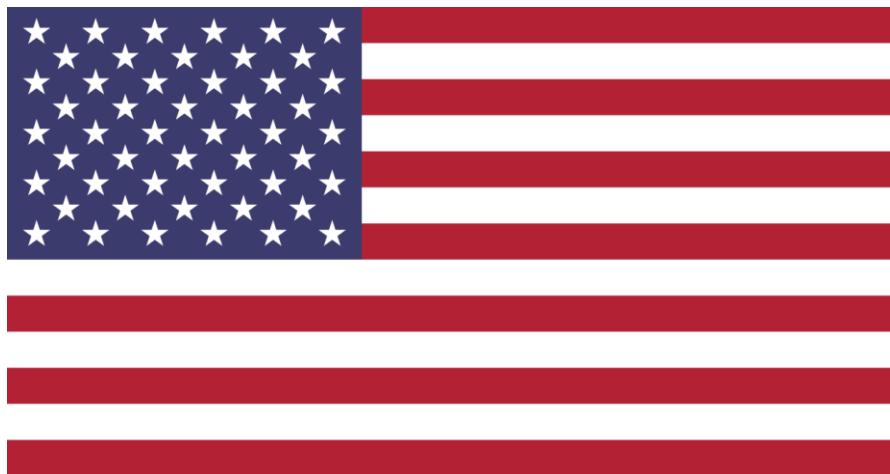
## #10: Just a Little Bit

31	6	2		111		7
65		3		18	0	1
11	21	2		10	1	13
46		9		37	3	1
2	29		8	21	1	5
16		2	4	13		1
127			42		127	
0	1		7		64	0
1	10	13		17	6	6
2	6		22	0	6	15
45			59			5
7	1	40		4	2	4
20		9	2	11		6
0		3		17		3
15	14		16	10		8
32		2	15		24	
5	105		1	9		21
11	5	9		0	2	7
1	58	0		16		9
8	1	1	1	1	1	1
3	7		54	12		28
						0

Answer: \_\_\_\_\_

## #11: Star-Spangled

I travel a lot for work, but nearly all of my business trips take me to the United States. I've had a chance to visit most of the states by now, and I love to check out the capitals when I'm there. So much history! Here's some info on my more recent trips. I have them all logged on my ISO 8601-compliant calendar.



My trip starting on February 17, 2017 took me from Indianapolis east to Columbia, then north to Montpelier, then east to Concord and finally south to Jackson.

Starting on August 14, 2017, I went from Atlanta, then north to Providence, and then west to Lansing. Short trip, that one.

My next trip started on December 6, 2017. I started in Carson City, then went to Santa Fe, and Phoenix after that.

Then for my next trip starting January 27, 2018, I visited Boise, then went east to Saint Paul, then west again to Cheyenne (but actually I stopped in Denver along the way!), and then west again to Salem.

I started another trip on May 24, 2018. That one started in Topeka before I went west to Salt Lake City, southeast to Oklahoma City, and northeast to Charleston.

Then, starting on October 7, 2018, I traveled from Boston, south to Dover, caught a long flight with a few connections to Honolulu, and then flew back to Salt Lake City again. I love that city!

On my most recent trip, starting March 19, 2019, I started in Richmond, then headed north to Albany and then south to Montgomery before going to north to Springfield. But stupidly, I left something in my first hotel and had to go back to Richmond before I went home!

You know where I haven't been though? The Dakotas. I can never tell those two apart.

Answer: \_\_\_\_\_