## CS50 presents

## CS50x Puzzle Day 2017

 with thanks to our friends at Facebook
## March 3I - April 3, 2017

- This packet contains 8 puzzles, all 8 of which are independent of one another.
- The answer to each puzzle is a single word or name in English.
- You may use the Internet and any other resources at your disposal.
- You are encouraged (but not required) to work on a team with I, 2, or 3 classmates or friends, either in person or online.
- To submit your answers, visit cs50.ly/submit anytime during the event.
- Have fun and good luck!

Special thanks to Matthew Warshauer of Facebook, who authored Puzzles \#\#I, 5-8. Puzzle \#3 is a modified version of a puzzle originally written by him.

## \#I: We All Fall Down



## \#2: Two Degrees

Outer ring: 普


Answer:

Page 2

## \#3: Look Up

|  |  |  |
| :--- | :--- | :--- |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |

Louis Armstrong
Juscelino Kubitschek de Oliveira
Rick Husband
Amado Nervo
Tenzing Norgay, Sir Edmund Hillary
John August Earl Bergstrom
Ben Elbert Douglas, Sr.
Guadalupe Victoria
Vicente Almandos Almonacid
William Mitchell
Edward Lawrence Logan
Francisco Bangoy
William P. Hobby
Abelardo L. Rodríguez
Luis Muñoz Marín
Abraham Lincoln
Sukarno, Mohammad Hatta
Albert Bond Lambert
John Wayne
Charles McGhee Tyson
U.S.A.

Brazil
U.S.A.

Mexico
Nepal
U.S.A.
U.S.A.

Mexico
Argentina
U.S.A.
U.S.A.

Philippines
U.S.A.

Mexico
Puerto Rico
U.S.A.

Indonesia
U.S.A.
U.S.A.
U.S.A.

## \#4: Sudochem

Think old, not new!

|  | 5 | 1 |  |  | 7 | 7 |  | 3 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 6 | 1 | 7 |  |  |  |  |  |  |
|  |  |  |  |  | 1 |  | 5 | 6 |
| 1 |  | 5 |  |  | 4 | 9 |  |  |
|  |  |  |  |  |  |  |  |  |
| 2 | 7 |  |  |  |  |  | 9 | 4 |
| 4 |  | 7 | 5 |  | 12 | 3 |  | 1 |
| 5 | 4 | 6 | 1 |  | 3 |  |  |  |
|  | 5 |  |  |  |  | 8 |  | 5 |
|  | 6 |  | 3 |  |  | 9 | 1 |  |
| (In this second one, the pink boxes are connected) |  |  |  |  |  |  |  |  |
| 7 |  |  |  |  |  |  |  |  |


| 7 |  |  |  | 6 | 8 | 9 | 8 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | 8 | ${ }^{2} 9$ |  |  |  |  |  |
| 2 | 14 |  |  | 4 |  | 3 |  |  |
| 9 | 2 | 3 | 4 |  |  |  | 5 |  |
|  | 8 |  |  |  |  |  | 11 | 4 |
|  | 4 |  |  | 9 | 3 | 1 | 2 | 9 |
|  | 4 | 6 |  | 8 |  |  |  | 7 |
|  |  |  |  |  | 4 | 8 |  |  |
|  |  | 2 | 7 | 9 |  | 13 |  | 4 |

Answer:

Page 4

## \#5: Taste the Rainbow

| goldfish | lobster | emerald | ruby |
| :---: | :---: | :---: | :---: |
| garfield | frog | jack o'lantern | sapphire |
| denim | sun | ocean | santa claus |
| grass | dory | nemo | sky |
| charmander | cardinal | target | stop sign |
| cookie monster | oriole | jade | twitter |
| cobalt | rubber duck | tiger | leprechaun |
| basketball | blood | yoshi | traffic cone |

Answer:

## \#6: Stacked

Within each stack:

- Each box has a positive integer.
- The bottom row can only contain the numbers I through 9.
- Each box is the sum of the two boxes below it.
- All boxes contain a unique number EXCEPT if colored (then those two share the same number, distinct from all the white and other-colored boxes).


Answer:

## \#7: The Next Unicorn

Everyone's looking for the next big thing in tech, but these companies think they've nailed it by making the last big thing a little better. Can you discover the identity of the venture capitalist who funds them?

| I | This is your one-stop shop for headgear for scientists, swimmers, or pilots. (6) |
| :--- | :--- |
| 2 | Are you a parent dealing with spit-up and vomit? This gadget uses compressed gas to <br> deflect particles so your baby remains nice and clean. (6) |
| 3 | Want to feel like you're on stage at Carnegie Hall? This virtual reality app puts the user <br> square in the middle of the brass section of the symphony, where you can play along <br> with the pros. (7) |
| 4 | This app allows you to follow along with the U.S. Supreme Court in real time, though <br> its name has been out of date since February 2016. (4) |
| 5 | Spend half your life waiting for a streetcar? With this on-demand service, never wait <br> again! Jush push a button and a trolley will show up immediately, ready to take you <br> wherever you want to go. (9) |
| 6 | This app shows you the location of nearby tornadoes. (7) |
| 7 | This Peter Pan simulator allows you to encounter his arch-enemy head-on. (8) |
| 8 | Ever have trouble getting your tiny items in a row? This app will arrange objects too <br> small for a human to see into the desired order. (9) |
| 9 | This app allows you to pretend to be someone who mends things (as opposed to a <br> tailor, soldier, or spy). (6) |
| 10 | British elevator enthusiast? This is the app for you. (4) |
| II | This app allows you to find a friend who is into the same thing you are: cast iron <br> skillets. (6) |
| 12 | This company is betting on the internet of things: they make electronic purses, <br> satchels, and backpacks. (4) |

## Answer:

## \#8: Rock, Steel, and Ice

You've bit off more than you can chew. You're not usually one to zero in on the problem, but it might've been a bad idea to explore this island cave without a light. Stumbling forward in the dark, you wonder what you'll find...


Answer:

