## Exploring Computer Technology

## FizzQuiz Thu 5 Oct. 2017

Write your name and answer at least one of the questions below. Then save this file with your answer and submit as an attachment via email to msantos@dragonacademy.org

NAME:

## Questions

- 1. True of False?
  - a) (7>9) FALSE
  - b) (NOT (2>=3)) TRUE
  - c) ( (7>9) OR (NOT 1>=1) ) FALSE
  - d) (NOT (2>=3) AND ( (7>9) OR (NOT 1>=1) ) FALSE
- 2. What follows are the Transition Rules of a Turing Machine and the initial state and input. Apply the rules one at a time till the machine halts, writing each time the content of the tape on a line below the previous one and writing on the left of each line, the current state of the machine (exactly as we have done in class)

$$\begin{array}{l} (A, 1) \rightarrow (0, C1, <) \\ (A, 0) \rightarrow (0, C0, <) \\ (C1, 0) \rightarrow (1, F, >) \\ (C0, 0) \rightarrow (0, F, >) \\ (F, 0) \rightarrow (0, A, >) \\ (F, 1) \rightarrow (1, A, >) \\ \text{Solution:} \end{array}$$

А	0	1.	1	Е
C1	0.	0	1	Е
F	1	0.	1	Е
А	1	0	1.	Е
C1	1	0.	0	Е
F	1	1	0.	Е
А	1	1	0	Е.
HALT				