3. [10 points] The table below gives data about the popularity of some popular web browsers during 2011. ${ }^{1}$

- $M$ is the month of the year. (So, for example, $M=2$ represents February 2011.)
- $F$ is the percent of internet users choosing Firefox.
- $C$ is the percent of internet users choosing Chrome.
- $S$ is the percent of internet users choosing Safari.

| $M$ | 2 | 4 | 6 | 8 | 10 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $F$ | 42.4 | 42.9 | 42.2 | 40.6 | 38.7 |
| $C$ | 24.1 | 25.6 | 27.9 | 30.3 | 32.3 |
| $S$ | 4.1 | 4.1 | 3.7 | 3.8 | 4.2 |

a. [5 points] Which, if any, of the statements below are supported by the data in the table above? (Circle all such statements or circle None of these.)

| $S$ is a function of $C$. | $F$ is a concave down function of $M$. |
| :--- | :--- |
| $C$ is a function of $S$. | $C$ is a concave up function of $M$. |
| $F$ is a decreasing function of $M$. | $C$ is a linear function of $M$. |
| $C$ is an increasing function of $M$. | $C$ is an exponential function of $M$. |

## None of these

The popularity of another browser, Internet Explorer, is a function of the month $M$. Let $g(M)$ be the percent of all internet users who chose to use Internet Explorer in month $M$ of 2011.
b. [2 points] Write an equation that expresses the fact that in January of 2011, $26.6 \%$ of internet users chose to use Internet Explorer as their internet browser.

## Answer:

c. [3 points] Let $B(p)$ be the amount, in dollars, of monthly bonuses paid to Internet Explorer programmers when $p$ percent of internet users chose to use Internet Explorer. Interpret, in the context of this problem, the expression $B(g(2))$. (Use a complete sentence and include units.)

[^0]
[^0]:    ${ }^{1}$ Source: http://www.w3schools.com/browsers/browsers_stats.asp

