1. The graph of $y = f(x)$ is given below.

(a) (8 points) Compute the following, or write $U$ if it is undefined. Read carefully to distinguish between $f$ and $f'$.

- $\lim_{x \to 7^+} f(x) = 3$
- $\lim_{x \to 7^-} f(x) = 1$
- $\lim_{x \to 2} f(x) = 2$
- $\lim_{x \to 6} f(x) = 0$

- $f(1) = 1$
- $f(2) = 2$
- $f'(1) = U$
- $f'(2) = 1$

(b) (2 points) Compute the average rate of change of $f$ on $[0, 2]$.

**Solution:** By definition, we have $\frac{\Delta y}{\Delta x} = \frac{f(2) - f(0)}{2 - 0}$. We compute $f(2) = 2$ and $f(0) = 3$. It follows that the average rate of change is $\frac{\Delta y}{\Delta x} = \frac{2 - 3}{2 - 0} = -\frac{1}{2}$.

2. (1 point (bonus)) Whose birthday is it today? Hint: Last year, my son’s birthday fell on Thanksgiving.

**Solution:** My oldest son

3. (1 point (bonus)) What will you eat on November 28, 2013?

**Solution:** Turkey, ham, stuffing, rolls, mashed potato, glazed carrots, ...