## Solution to Strategic Eating

(Puzzle by Qi Qi)

## Answer: UNCLESAM

First, transforming the 7 bolded numbers by $\mathrm{A}=1, \mathrm{~B}=2, \ldots$ yields PLAYNIM. A bit of googling shows that Nim is a combinatorial game about taking candies from piles, with the person taking the last candy winning. Wikipedia gives an easy way to find the optimal strategy involving XOR. Playing 7 games of Nim with the 7 rows of piles given, we find that each row has exactly one optimal first move (as clued by the flavortext: "What shall I eat first?"). They are taking:

20 from pile 3
23 from pile 2
15 from pile 1
19 from pile 2
15 from pile 3
14 from pile 5
7 from pile 6
Doing the $\mathrm{A}=1, \mathrm{~B}=2, \ldots$ transformation on the amounts taken gives TWOSONG.
Now notice the positions of the piles we take from and the positions of the bolded piles. They are, in order, 3212356 and 5432213. In the 1-do 2-re 3-mi musical scale, these two melodies are the melodies of the pop songs DYNAMITE and FIREWORK respectively (note the "explosive" mentioned in the flavor text).

Now we are almost done. The bottom of the puzzle asks "From whom do I buy $\qquad$
$\qquad$ ?" Note that both blanks are 8 spaces, and both the songs we found have 8 letters. Looking up DYNAMITE FIREWORK SHOP leads us to a website of Uncle Sam's Dynamite Fireworks, so the answer is UNCLESAM.

