Valentine's Day M&Ms come in 4 colors: white, light pink, dark pink, and red. The colors are not evenly distributed. Approximately 20% of the Valentine's Day M&Ms are white, 27% of the M&Ms are light pink, 23% of the M&Ms are dark pink, and 30% of the M&Ms are red.

Suppose you are blindfolded and get to choose any number of M&Ms from a vat of M&Ms (the vat has thousands and thousands of M&Ms in it). If you select exactly 5 M&Ms and they are all white you get $100. If you select 6 M&Ms and at least 5 of them are white, you get $95. If you select 7 M&Ms and at least 5 of them are white, you get $90. This pattern continues. For each additional M&M you take, your prize for having selected at least 5 white M&Ms decreases by $5.

How many M&Ms would you select? Justify your strategy using words, pictures, tables, equations, etc.

Bonus questions:

Would your strategy change if the prizes were awarded for choosing at least 5 *red* M&Ms? If so, how?

Would your strategy change if prizes were earned for choosing at least **4** white M&Ms (with the same original rules of getting $100 if you select only 4 M&Ms total and the prize decreasing by $5 for every additional M&M selected)? If so, how?

Would your strategy change if the original rules stayed the same but prizes started at $1000 and continued to decrease by $20? If so, how?