



Problem of the Week

Problem A and Solution

Better Deal?

Problem

From a candy machine, I can buy 8 candies for 25 cents. Alternatively, I can buy 64 candies in a package for 2 dollars and 20 cents.

If I want to buy 128 candies for my class, how should I buy the candies in order to spend the least amount of money?

NOTE: 1 dollar is equal to 100 cents.

Solution

Since 128 is equal to 2×64 , two packages of candies will be enough for the class. This would cost $2 \times \$2$ plus 2×20 cents, for a total of \$4 and 40 cents.

We can use skip counting to calculate how much the candies will cost if we buy them from the candy machine. This is summarized in the table below.

Number of Candies	Cost (cents)
8	25
16	50
24	75
32	100
40	125
48	150
56	175
64	200

Thus, 64 candies from the candy machine will cost 200 cents, which is equal to \$2. This is less than the cost of 64 candies in a package.

Therefore, to spend the least amount of money, we should buy all 128 candies from the candy machine. The total cost will then be $2 \times \$2 = \4 .