

My Favourite Problem

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ELHP

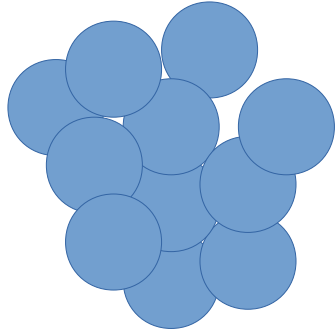


We have a
logo!

This is a semi-chestnut.

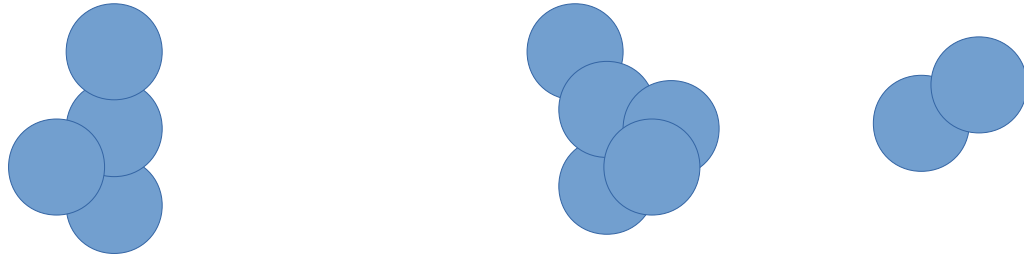
Perhaps you can help it become a chestnut!

I give you a heap of n tokens



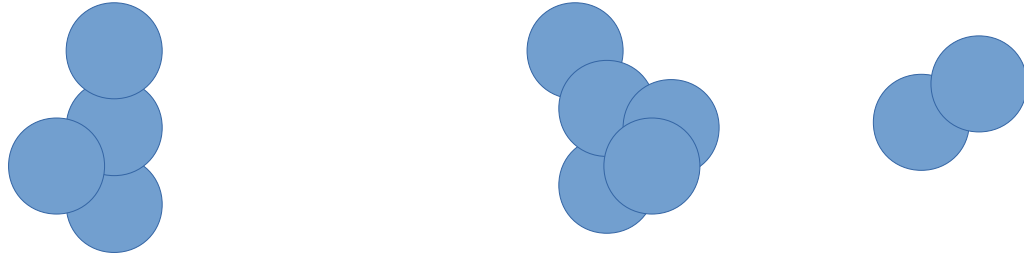
n is a positive integer

You divide it into sub-heaps



As many as you like, any positive integer sizes you like.

I multiply the sizes of the sub-heaps
and pay you that many Euros.



$$4 \times 5 \times 2 = 40$$

How do you maximise your reward
for all positive n ?

The ribbon problem



I give you n metres of ribbon. n may or may not be an integer.

The ribbon problem



You cut it into pieces as you wish. The number of pieces should be a positive integer.

The ribbon problem



I multiply the lengths together
and pay you that many Euros.

The ribbon problem



How do you maximise your reward for all positive n ?