Deal or No Deal

> This is a kata intended to work on familiarity with browser-side programming - the underlying game is relatively simple but relies on keeping state and dealing with user interaction. It can be approached using any number of languages (Vanilla JS, CoffeeScript etc.); frameworks (jQuery, AngularJS etc.) or methodology (e.g. TDD)

Deal or No Deal

Background

Deal or No Deal is a game show that started off as a finale of the Dutch Lottery, before becoming an international phenomonen in its own right. The rules are relatively simple:

- There are *n* boxes labelled with the integers from 1 to *n*;
- Each of these boxes (at random) contains a unique amount of money. The amounts of money are pre-determined before the game (so everyone knows what money is available), but nobody knows what money is located where;
- A player is selected, and they choose a box that is "their box" for the game. If nothing happens before the end of the game, that person will win the money that is in that box.
- The game is played in a series of "rounds". Rounds are made up of two phases:
    - A user opens a (pre-determined) amount of boxes and reveals the amounts contained within. By eliminating these amounts of money, the user has a better idea how much money is in their box.
    - After all of the boxes in this round have been opened, the "banker" offers an amount of money to the contestant. The contestant then has the choice of **deal** (i.e. take the amount of money offered by the banker, and end the game) or **no deal** (i.e. move on to the next round).
- After all the rounds, there will be 2 boxes left. If the contestant chooses "no deal" on the last offer, they will win what is contained inside their box.

Specific Values

In the UK version of the game, there are 22 boxes, and they contain the following amount:

1p	£1,000
10p	£3,000
50p	£5,000
£1	£10,000
£5	£15,000
£10	£20,000
£50	£35,000
£100	£50,000
£250	£75,000
£500	£100,000
£750	£250,000

There are 6 rounds. In the first round, five boxes are open. In each subsequent round, three boxes are open.

You can see an example of a show here: http://www.dond.co.uk/game-stats/deal_or_no_deal_stats_lynn.php

Challenge

Your aim is to make a website in which the user can play Deal or No Deal (presumably the UK version, with the values above).

You may find it helpful to do so in the following steps, but if you have other ideas, then great!:

1. 22 boxes are listed with randomly selected "amounts of money" in them. The boxes and amounts are listed sensibly on the page.
2. A user can choose their own box.
3. A user can choose boxes and this will eliminate the contents of that box from the money ladder. Once a user has got to the end of the game, they "win" what's in their box
4. After each round, the banker will make an offer that the user can accept, ending the game, and revealing the amount on their box.
    a. *(A good basic formula for the offer is the **mean of the square roots of the remaining value, all squared.** Feel free to come up with something more interesting, though!)*

Possible Extensions

1. If the user accepts an offer, then they can play the rest of the game, to "prove" whether they have made the correct decision
2. If the user accepts an earlier offer, and it turns out that it was a marginal decision (i.e. the proposed offer is similar to the offer they have accepted), then the banker may offer them the chance to "re-enter" the game.
3. Box 23
4. Make the number of boxes, and the length of each round customisable.
5. Make the UI pretty!