you need:
- 0-9 dice
- pencil and paper

Limits

Roll the dice four times to get four digits.

Arrange those digits in these boxes, to make decimal numbers between 0 and 1.

0.☐☐ and 0.☐☐

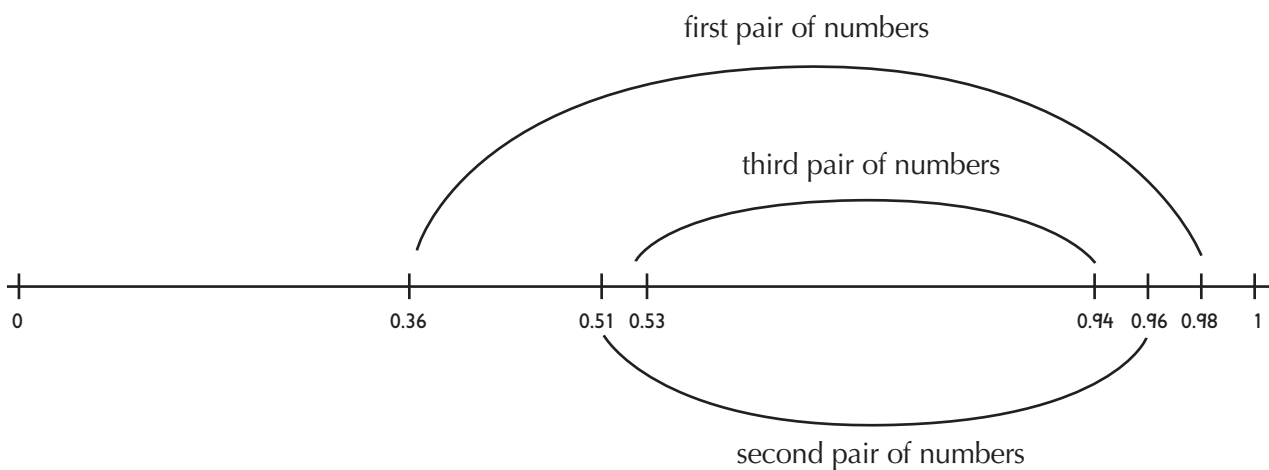Sketch those numbers on a 0 to 1 number line. These are your limits.

Now roll the dice four more times and make two more numbers. Try to make numbers that fit between the two limits. If you succeed, these are your new limits.

Continue like this until you can't go on.

How many times can you fit a new pair of numbers between the previous limits?

Sample game

First four digits: 3, 6, 8, 9 ➞ 0.36 and 0.98

Next four digits: 1, 5, 6, 9 ➞ 0.51 and 0.96 (both between 0.36 and 0.98)

Next four digits: 3, 4, 5, 9 ➞ 0.53 and 0.94 (both between 0.51 and 0.96)

Next four digits: 1, 2, 5, 8 ➞ can't make two numbers between previous limits

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Try several times. What is your best score?