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COSC 117

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Homework 10 logic and runs

1. Want: Number of time the a die hits 6 x times in a row from 1 to 10, as well as the number of rolls that were needed to achieve this

How: Short method to roll die, create a counter, when die =6 increment, if it isn’t six counter is zero, do this until counter =10, store all rolls in the array list, go through do a similar technique when counter =2 increment store array 2 then reset counter and so on

Need: all the user needs to do is press the run button

Output:

-1

Number of rolls needed = 98355742

Runs of length 1 = 11378447

Runs of length 2 = 1897340

Runs of length 3 = 316468

Runs of length 4 = 52537

Runs of length 5 = 8800

Runs of length 6 = 1479

Runs of length 7 = 269

Runs of length 8 = 35

Runs of length 9 = 5

Runs of length 10 = 1

-2

Number of rolls needed = 27930501

Runs of length 1 = 3233014

Runs of length 2 = 537310

Runs of length 3 = 90029

Runs of length 4 = 14845

Runs of length 5 = 2590

Runs of length 6 = 423

Runs of length 7 = 74

Runs of length 8 = 11

Runs of length 9 = 3

Runs of length 10 = 1

-3

Number of rolls needed = 36805138

Runs of length 1 = 4258189

Runs of length 2 = 710059

Runs of length 3 = 118248

Runs of length 4 = 19736

Runs of length 5 = 3169

Runs of length 6 = 552

Runs of length 7 = 96

Runs of length 8 = 20

Runs of length 9 = 2

Runs of length 10 = 1

-4

Number of rolls needed = 163616406

Runs of length 1 = 18940045

Runs of length 2 = 3159588

Runs of length 3 = 526170

Runs of length 4 = 87335

Runs of length 5 = 14684

Runs of length 6 = 2456

Runs of length 7 = 366

Runs of length 8 = 71

Runs of length 9 = 12

Runs of length 10 = 1

-5

Number of rolls needed = 125782124

Runs of length 1 = 14562973

Runs of length 2 = 2423072

Runs of length 3 = 404362

Runs of length 4 = 67356

Runs of length 5 = 11201

Runs of length 6 = 1852

Runs of length 7 = 300

Runs of length 8 = 46

Runs of length 9 = 9

Runs of length 10 = 1