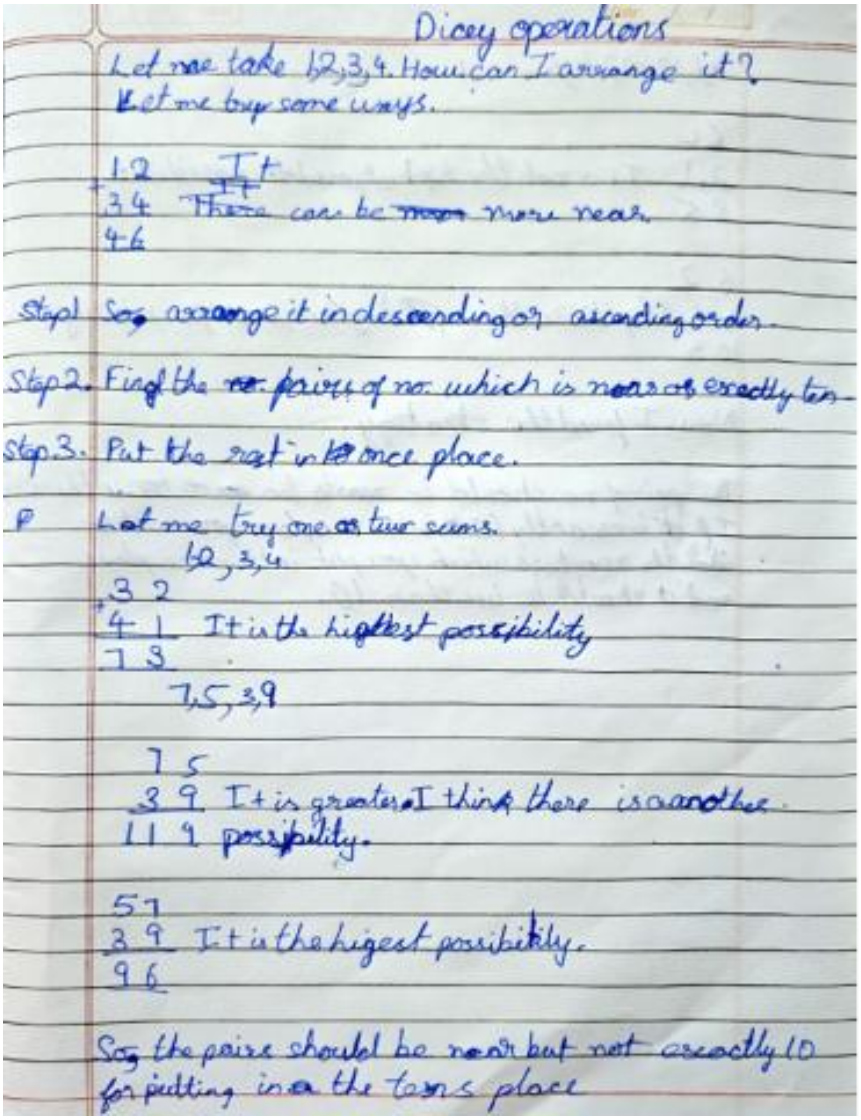
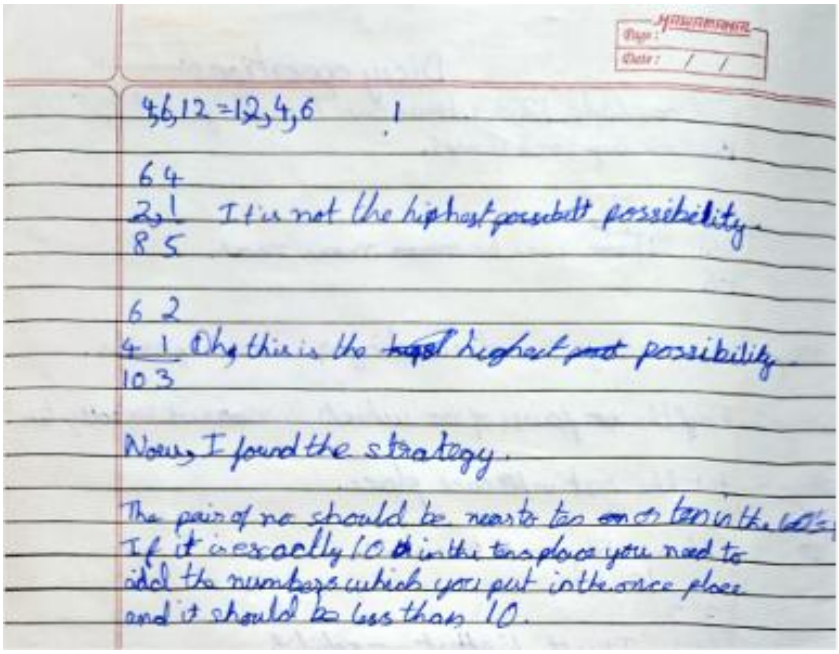
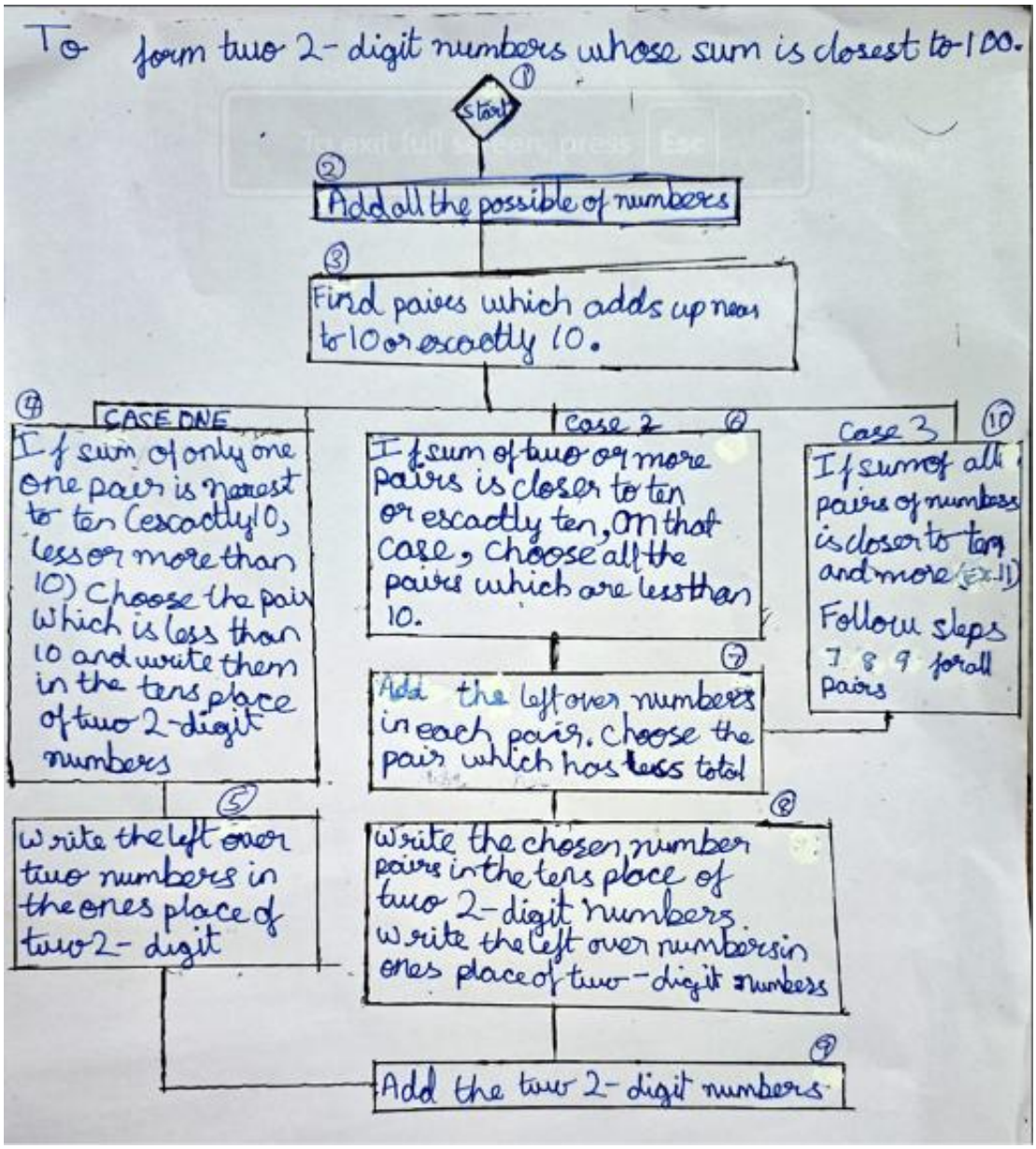
Hello NRICH team,

This is Shivaprasad from Chennai, India. I worked on the Dicey operations primary live problem (https://nrich.maths.org/games/dicey-operations) as part of STEPS IN MATH program by The GYM Foundation. Initially I took some numbers and found approach to get two 2-digit numbers whose total is closest to hundred. Later, I made a flowchart of the steps. Please find my work below.





Based on working on various possible number sets, found 3 possible cases and wrote the steps as a flowchart.



Case 1

6, 4, 2, 3

6+4=10

6+2=8

6+3=9

4+2=6

4+3=7

2+3=5

$$\begin{array}{r} 64 \\ +32 \\ \hline 96 \end{array}$$

⇒ this follows ①, ②, ③, ④, ⑤, ⑨

Case 2

6, 3, 4, 5

6+3=9

6+4=10

6+5=11

3+4=7

3+5=8

4+5=9

$$\begin{array}{r} 64 \\ +35 \\ \hline 99 \end{array}$$

⇒ This follows steps ①, ②, ③, ⑥, ⑧, ⑨

Case 3

6, 5, 9, 2

6+5=11

6+9=15

6+2=8

5+9=14

5+2=7

9+2=11

$$\begin{array}{r} 62 \\ +59 \\ \hline 121 \end{array}$$

⇒ This follows steps ①, ②, ③, ⑩, ⑦, ⑧, ⑨