

Naive search example

• $x = \overline{22121}$ and $\underline{1} \leq \text{rk}(x) \leq \underline{5}$. Does $\text{rk}(x) = 3$?

- Construct the set of bands B having maximum conjugate length $l = 3$.

- $|B| = 1029$

- Consider every band in every position:
 - $(b_1, b_2, b_3) \in B \times B \times B$
 - $|B|^3 = 1,089,547,389$ braids to compare.

Naive search example

- $x = \bar{2}\bar{2}1\bar{2}1$ and $1 \leq rk(x) \leq 5$. Does $rk(x) = 3$?
- Construct the set of bands B having maximum conjugate length $l = 3$.
 - $|B| = 1029$
- Consider every band in every position:
 - $(b_1, b_2, b_3) \in B \times B \times B$
 - $|B|^3 = 1,089,547,389$ braids to compare.

Templated search