Student Name: $\qquad$
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## Quiz 2. Disk algorithms

Suppose you have the following system: main memory which can hold at most 8 integers, and a disk with 2 integers per block.

As an input, you have the following file of 24 sorted integers:

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |

Propose a two-pass algorithm which would shuffle these numbers, so they are written into a new file in a random order.

Write a high-level pseudocode or explain each phase in words. Use back of the page ->

Draw result of Phase 1:

Draw at least 3 first steps of phase 2:

