

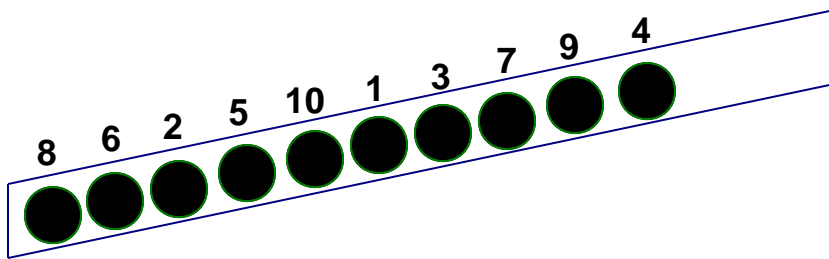
Here is a problem one of my college professors gave me back in my college years.

Ten cartons are arranged on a tilted roller track, as shown below. The mechanical arm used to sort them into numerical order from left to right can move up to three adjacent cartons at a time to the right-hand top of the track. The cartons roll down to fill the gap. Sort the cartons in five moves.

Examples (further explanation)

If you used the mechanical arm to lift up cartons 6 and 2 and moved them to the right-hand top of the track, the new order of the cartons would become 8-5-10-1-3-7-9-4-6-2.

If instead you used the mechanical arm to lift up cartons 3-7-9 and moved them to the right-hand top of the track, the new order would become 8-6-2-5-10-1-4-3-7-9.



1<sup>st</sup> move is \_\_\_\_\_

2<sup>nd</sup> move is \_\_\_\_\_

3<sup>rd</sup> move is \_\_\_\_\_

4<sup>th</sup> move is \_\_\_\_\_

5<sup>th</sup> move is \_\_\_\_\_