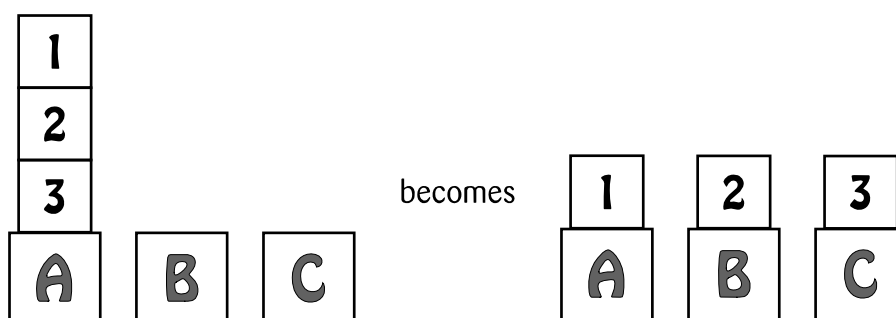


# A STACKING PROBLEM

## Investigation Guide

This guide assumes you have tried the task first.

1. Solving the task requires systematic movement of the numbered cubes. Try this simpler task, keeping in mind what needs to happen to get Block 3 onto its target position of C.



Did you notice that for 3 to reach its target, the 1/2 stack had to be moved first?

*You have a choice when moving Block 1. Where should it be placed and why?  
How many moves until you are able to move Block 3 to C?  
How many moves altogether?*

Now look at the task again. Consider breaking the problem into parts and thinking about important targets in a similar way.

2. (a) At the moment you move Block 6 from A to C, where do the other 5 blocks have to be?  
(b) Before the move in (a), Block 5 has to be on B. Where do Blocks 1 - 4 have to be?  
It takes 15 moves to reach position (b) from the start. Can you do them?  
It takes 31 moves to reach position (a) from the start. Can you do them?

Now try the task again.

3. Imagine you have to fax instructions for solving the six block puzzle to someone else. In the best way you can, describe how to systematically move the blocks. Pictures may help.