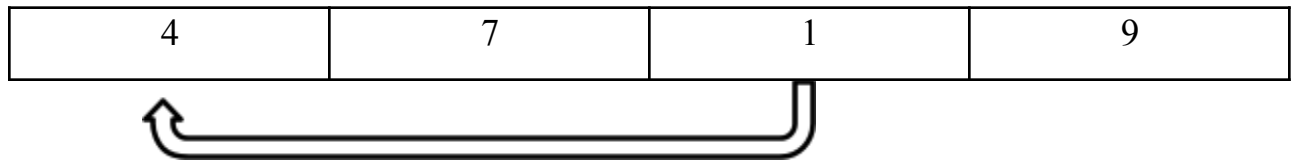
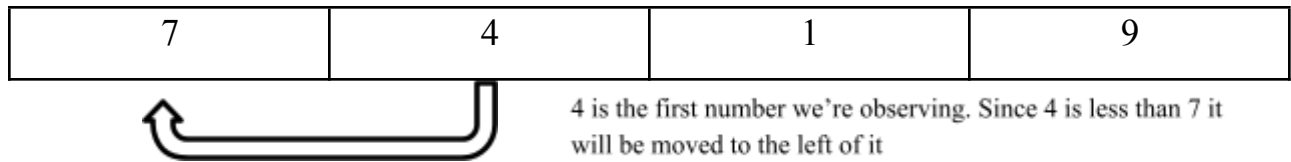


Name:

Insertion Sorting with Dice

You have been given two dice to help you complete this worksheet. For each number listed below you will roll your dice and sort the resulting number in the spaces provided. This must be done following the insertion sorting algorithm. To do so, you will have 10 total rolls to generate all ten numbers you need. After you find the 9 numbers, sort the numbers from largest to smallest. An example is shown below...

repeats that exist.



Once 4 is properly positioned we move on to the next number in the set which is 1. We compare this to the element directly to the left which is 7. Since 1 is less than 7 itll move to the left, then it will need to be compared with 4. 1 is less than 4 again so it will move to the left



The final number we must compare is 9. We take 9 and compare it to the element directly to the left of it once again. Since 9 is greater than 7, it will stay in the position it is currently in. We now have no numbers left in our set to compare so we know the set is now sorted.

Sort 6: Look at number 7. Is it smaller than the sixth, fifth, fourth, third, second number or the first number, if so move it where it belongs and shift the other number after it. If not, leave it where it is.

— — — — — — — — — Number of places moved $\frac{\quad}{7}$

Sort 7: Look at number 8. Is it smaller than the seventh, sixth, fifth, fourth, third, second number or the first number, if so move it where it belongs and shift the other number after it. If not, leave it where it is.

— — — — — — — — — Number of places moved $\frac{\quad}{8}$

Sort 7: Look at number 9. Is it smaller than the eighth, seventh, sixth, fifth, fourth, third, second number or the first number, if so move it where it belongs and shift the other number after it. If not, leave it where it is.

— — — — — — — — — Number of places moved $\frac{\quad}{9}$

Add up your moves:

$$\frac{\quad}{2} + \frac{\quad}{4} + \frac{\quad}{6} + \frac{\quad}{8} = \frac{\quad}{\text{Total}}$$

$$\frac{\quad}{3} + \frac{\quad}{5} + \frac{\quad}{7} + \frac{\quad}{9} = \frac{\quad}{\text{Total}}$$

Try it again with a new group of 9 numbers. Use the back of this page as your workspace.