***Train of 5 Problem***

***C:\Users\Julia\AppData\Local\Microsoft\Windows\Temporary Internet Files\Content.IE5\GKX3P10J\MC900320954[1].wmf***

A train of length 5 is a row of rods whose combined length is 5. Here are some examples:

rd1rd2rd2

rd2rd1rd2

rd1rd3rd1

rd1rd4

rd5

Notice that the 1-2-2 train and the 2-1-2 train contain the same rods but are listed separately. If you use identical rods in a different order, it is considered a separate train.

* How many trains of length 5 are there? 6? 7? 10? and n?

Now, suppose that if you use identical rods in a different order it is considered the same train.

* How many trains of length 5 are there? 6? 7? 10? and n?