

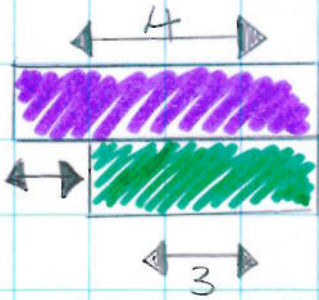
3 rod = a

4 rod = b

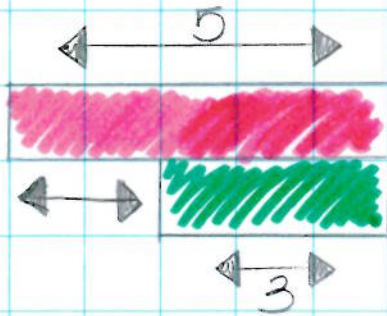
5 rod = c

Combining Lengths!

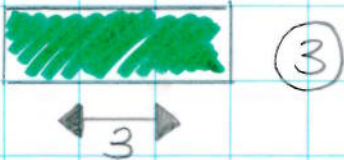
Using Rods 3, 4, 5 I managed to make lengths of consecutive numbers 1-9!



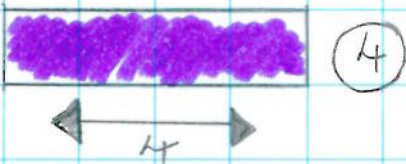
① $4 - 3 = 1$
This makes length 1



② $5 - 3 = 2$
This makes length 2



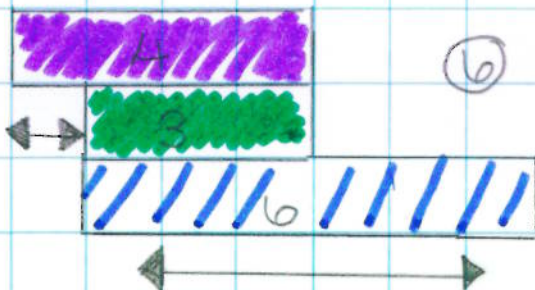
③ A single 3 Rod makes 3



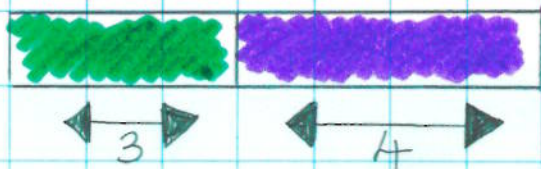
④ A single 4 Rod makes 4



⑤ A single 5 Rod makes 5



⑥ $4 + 3 = 7 - \textcircled{1} = \underline{\underline{6}}$



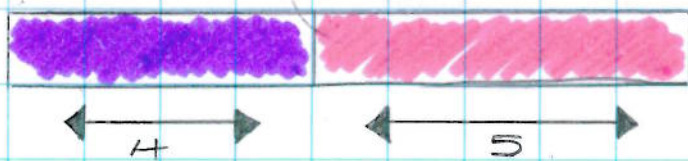
⑦

$$3\text{rod} + 4\text{rod} = \textcircled{7}$$



⑧

$$3\text{rod} + 5\text{rod} = \textcircled{8}$$



⑨

$$4\text{rod} + 5\text{rod} = \textcircled{9}$$

The maximum number of lengths you can make consecutively
is 9.