Rod Trains

Level C

You have 10 different rods, each a different color and a different length. Rod trains can be just one rod, several rods of equal size, or several rods of differing sizes. The order of the rods matters, making rod trains unique from one another.

For example:

a rod train made up of a red on the left side and a purple on the right

is a different rod train from one that has a purple on the left side and a red on the right.

Consider the yellow rod. Determine all the different combinations of rods that can be arranged so that you have a rod train that is equal to the length of the yellow rod.

How many possible rod trains are equal in length to a yellow rod?
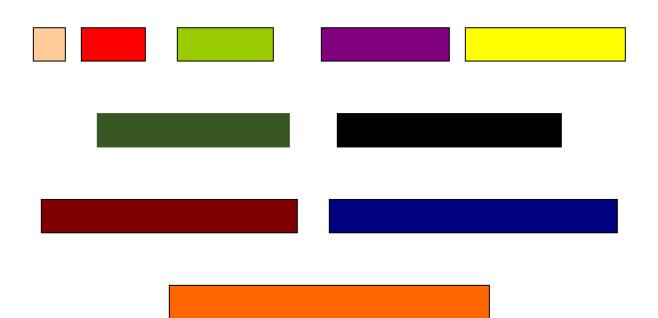
Explain your solution method.

How do you know you have all the combinations?

Cuisenaire Rods