

Name: \_\_\_\_\_

Date: \_\_\_\_\_

## **Identical Plates**

You have two lego plates of the same size; the plates are  $m$  studs wide and  $n$  studs long. You start with one plate flat on the table in front of you. How many different ways can you position the second plate on top of the first one, so it is connected by at least one stud?

*Show your work, and write your answer in a complete sentence.*