

# Dividing Using Multiplication and the Area Model

**Akiko was experimenting with numbers and came up with an idea.**

**She said:**

Whenever you add two multiples of 7, the sum will **always** be a multiple of 7.

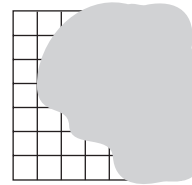
And if you add a multiple of 7 to a number that is **NOT** a multiple of 7, the sum is **never** a multiple of 7.

**And she wrote:**

Mult of 7 + Mult of 7 = Mult of 7

Mult of 7 + ~~Mult of 7~~ = ~~Mult of 7~~

- 1 Try some experiments to check her claims, and then explain what you found. An array picture with seven rows may help.




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**Extend Akiko’s idea. Here is an experiment. Try it.**

What if neither number is a multiple of 7?

~~Mult of 7~~ + ~~Mult of 7~~ = ???

None of the numbers in Lists A and B is a multiple of 7.

List A	List B
3	4
10	11
17	18
24	25

- 2 Add any number from A to any number from B.

Is the sum a multiple of 7? \_\_\_\_\_

- 3 Add two numbers from the same list.

Is the sum a multiple of 7? \_\_\_\_\_