*Operations and Algebraic Thinking – Division as an Unknown Factor (3.0A.7)*

GRADE

3rd

Action Based Learning/MATH



I will use *Math & Movement* Skip Counting Mats and Kinesthetic Learning to understand division as an unknown factor.

[](https://www.google.com/imgres?imgurl&imgrefurl=http://www.communityschoolnaples.org/page.cfm?p%3D1072&h=0&w=0&sz=1&tbnid=zs_ylVQYEnR7NM&tbnh=190&tbnw=265&zoom=1&docid=fFDgtVSo9oQ_yM&ei=KpZ_Uo_ABKL-4APB7oGYCQ&ved=0CAEQsCU)

MATERIALS

* + *Math & Movement* Hopping Mats and *Multiplication and Division Word Problems?* worksheet
  + Pencils
  + Smart Board lesson
  + Note Cards with division problems on them
  + Math and Movement Division as an Unknown Factor

Vocabulary

* Product: the answer to a multiplication problem
* Factors: the numbers being multiplied in a multiplication problem
* Quotient: the answer to a division problem
* Dividend: the amount that you want to divide up
* Divisor: the number to divide by



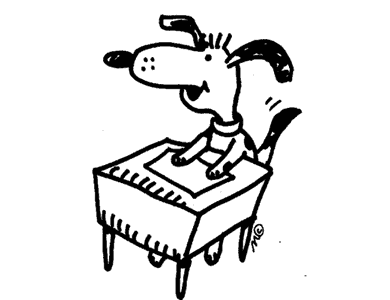
* Have the *Math & Movement* Hop by 3’s, 4’s, 6’s, 7’s, 8’s and 9’s spread around the room in one large rectangular formation.
* Let’s look at this division problem

32 ÷ 8 = \_\_\_\_\_\_

* To solve this division problem we can use fact families to turn the division problem into a multiplication problem that can easily be solved by jumping on the Math and Movement Mats.
* The dividend in the division problem is the same as the product of the corresponding multiplication problem and the divisor is one of the factors of the corresponding multiplication problem.
* The quotient for the division problem is the other factor in the corresponding multiplication problem.
* Look at this problem and see the matching numbers:

8 x \_\_\_ = 32

* To find the quotient of the division problem we need to figure out the missing factor in the multiplication problem. 8 times what number equals 32?
* Let’s go to the 8 skipping mat because 8 is the other factor in the multiplication problem.
* One student come to 32 and stand here
* Another student stand on the 0 and jump on all the large numbers until you get to 32, while jumping count by ones and say “One” “Two” “Three” and “Four”
* So 8 x 4 = 32
* So if 8 x 4 = 32 what is 32 ÷ 8? 4



STUDENT WORK TIME

* Your job is to work in pairs to solve the division problems on the note cards by turning the division problem into a multiplication problem
* Use your Math & Movement Mats to help you solve the division problems.
* You will have 8 minutes to complete your note cards