

Lesson: Multiplication & Division

Third Grade Objective 1.03: Develop fluency with multiplication 1 x 1 through 12 x 12

Lesson

Suppose there are nine girls at the park having a picnic. Emma is one of the girls at the park. Her mom sent two heart shaped cookies for each girl to enjoy after her picnic lunch. Jennifer, one of the other girls, asks Emma how many cookies she brought to the park.

One of the ways we can solve this problem is with pictures.

Here is one cookie for each of the nine girls:



Here is a second cookie for each of the nine girls:



If you count up all of the cookies, there are 18.

Now try these using the picture drawing method:

1. 8×6

2. 7×4

Another way to solve this problem is by using your fingers (maybe not the way you think!).

Hold both of your hands out in front of you so you can see all of your fingernails. Starting with the pinky finger on your left hand, count your fingers across both hands until you get to the pinky finger on your right hand.



When you are solving a multiplication fact 9×1 through 9×10 , hold down the number of the finger you are multiplying by 9. If you are solving 9×2 , hold down finger #2.



Count the number of fingers to the left of the held down finger (which would only be your pinky finger) and then the numbers to the right of the held down finger (which would be 8 fingers, fingers #3-10).

The answer is 18 (one finger to the left, and 8 fingers to the right of the finger you are holding down).

This website has a great step by step picture tutorial :

<http://www.mathnstuff.com/math/spoken/here/2class/60/fingers.htm>

Note – This method ONLY works with the multiplication facts 9×1 through 9×10 !

Try these on your own using the finger counting method:

1. 9×3
2. 9×6
3. 9×4
4. 9×7

There is another helpful way to learn the multiplication facts 9×1 through 9×10 . Make a list of the problems:

- $9 \times 1 = 09$
- $9 \times 2 = 18$
- $9 \times 3 = 27$
- $9 \times 4 = 36$
- $9 \times 5 = 45$
- $9 \times 6 = 54$
- $9 \times 7 = 63$
- $9 \times 8 = 72$
- $9 \times 9 = 81$
- $9 \times 10 = 90$

Notice that the digits in the tens place go from 0-9 down the list of products (answers). Now look at the digits in the ones place of the products. Starting from the top and going down the digits go from 9-0.

Also, if you add the digits in each of the products, the sum (answer) will always be 9.

$$0 + 9 = 9$$

$$1 + 8 = 9$$

$$2 + 7 = 9$$

$$3 + 6 = 9$$

$$4 + 5 = 9$$

$$5 + 4 = 9$$

$$6 + 3 = 9$$

$$7 + 2 = 9$$

$$8 + 1 = 9$$

$$9 + 0 = 9$$

Now try these problems on your own using any method that you choose:

1. 9×8

2. 9×5

3. 9×9

Other multiplication facts practice (remember the *tricks* above only work with the nines facts)

1. 8×7

2. 4×6

3. 3×7

4. 8×4

5. 6×7

www.multiplication.com has tons of great multiplication games, activities and resources!

Check Your Answers:

Using the finger counting method:

1. $9 \times 3 = 27$
2. $9 \times 6 = 42$
3. $9 \times 4 = 36$
4. $9 \times 7 = 63$

Using any method you choose:

1. $9 \times 8 = 72$
2. $9 \times 5 = 45$
3. $9 \times 9 = 81$

Other multiplication facts practice:

1. $8 \times 7 = 56$
2. $4 \times 6 = 24$
3. $3 \times 7 = 21$
4. $8 \times 4 = 32$
5. $6 \times 7 = 42$