Grade Level / Content Area:	*Grade 3-5 / Math - Multiplication*
Standards:	CCSS.MATH.CONTENT.4.NBT.B.5
Concept/Topic to Teach:	Multiplication by Successive Addition (up to 9)

I. Getting students set to learn Addition

Introduction/Review; Review the work recently done by the class related to multiplication.
Anticipatory Set; Explain that we are going to learn how to multiply numbers by using arrays in today's lesson. Demonstrate what an array is.
Objectives;

- The students will be able to multiply small numbers (equaling up to 9) using successive addition of equal groups.
- Students will demonstrate multiplication and addition strategies.
- Students will explain to the teacher what multiplication using successive addition means and develop their skills with small numbers.

II. Instruction

- **Input and Modeling;** Go through the first two examples from the work sheet together. Remind students of the importance of listening to or reading the question carefully before answering it. Ask the students to complete the remainder of the first worksheet page.

III. Checking for understanding

Checking Understanding; Review the student's completed first worksheet pages and explain any errors.
Guided Practice; Have the students complete the second page of the worksheet.

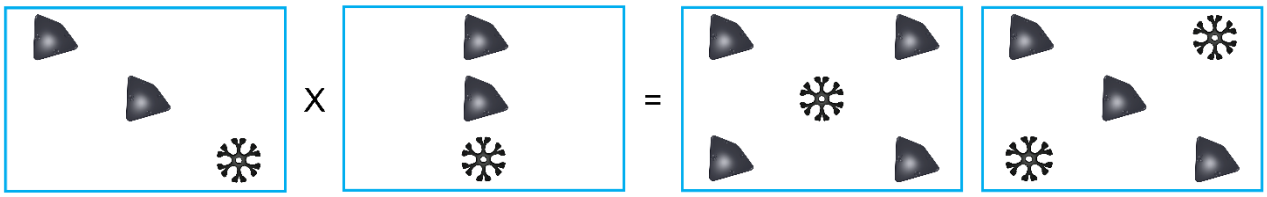
IV. Independent practice – Hands-On Learning

Independent Practice;
Pass out the HyPars Educational kits to the students and indicate these parts will be used to learn more about multiplication (equaling up to 9) by successive addition of equal groups.

- From the HyPars Educational Kit parts, have each student make two groups of three parts (consisting of some HyPars and some Connectors).
- Ask the students what 2 X 3 equals (have them count the equal groups of parts they have for the answer).
- Ask the students to assemble (connect) the entire group of parts and them again ask how many parts are in this first assembly.
- Upon confirmation of each student understanding the multiplication of 2 X 3, have the students get four groups of two parts from their HyPars Educational Kits (including some HyPars and some Connectors).
- Ask the students what 4 X 2 equals (have them count the 4 equal groups of 2 parts they have for the answer)
- Ask the students if 4 X 2 equals the same answer as 2 X 4.
- Ask the students to assemble (connect) the entire group of parts and then again ask how many parts are in this second assembly.
- Have the students disassemble their assemblies and put the parts away back into their HyPars Educational Kits.

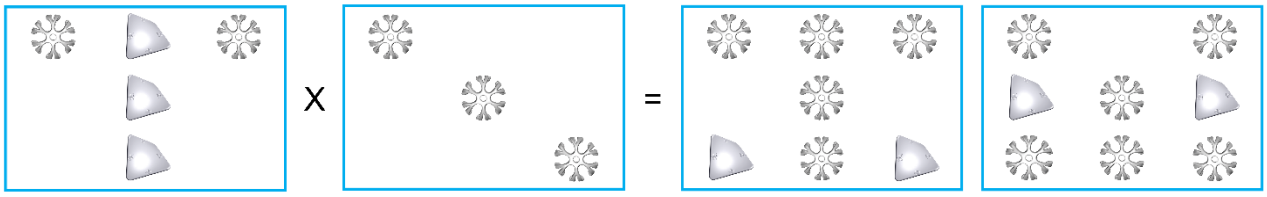
Multiplication by Successive Addition (up to 9) Worksheet

1) Multiply the number of HyPars in the first Figure by the number of HyPars in the second Figure using successive addition. Circle the third or fourth Figure that has the correct total. Fill in the equation below the Figures.



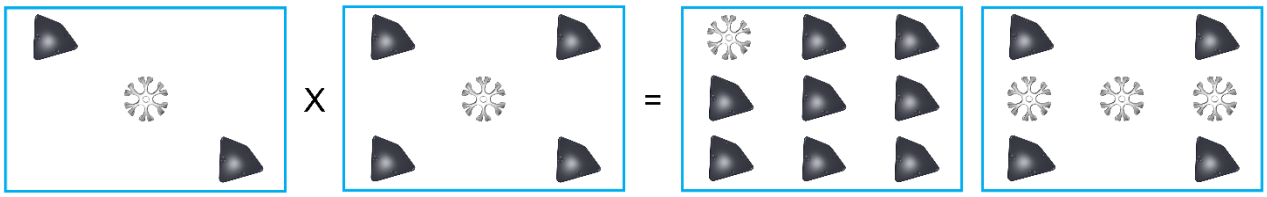
1b) _____ x _____ = _____

2) Multiply the number of Connectors in the first Figure by the number of Connectors in the second Figure using successive addition. Circle the third or fourth Figure that has the correct total. Fill in the equation below the Figures.



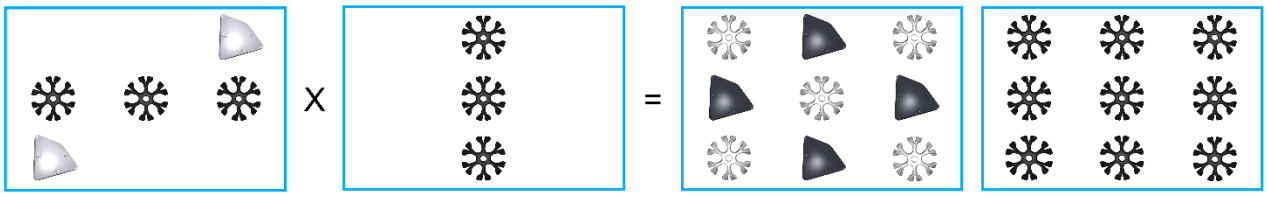
2b) _____ x _____ = _____

3) Multiply the number of black HyPars in the first Figure by the number of black HyPars in the second Figure using successive addition. Circle the third or fourth Figure that has the correct total. Fill in the equation below the Figures.



3b) _____ x _____ = _____

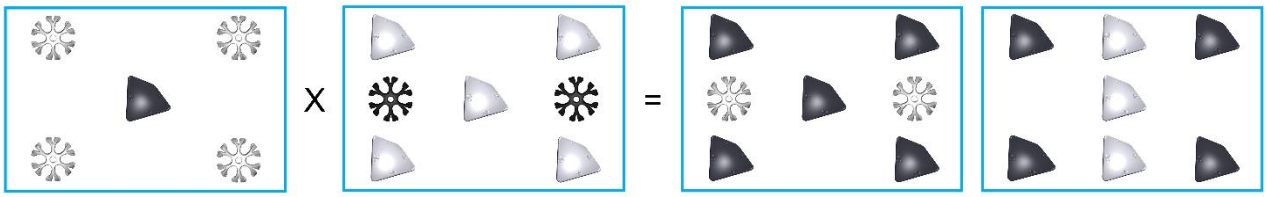
4) Multiply the number of black Connectors in the first Figure by the number of black Connectors in the second Figure using successive addition. Circle the third or fourth Figure that has the correct total. Fill in the equation below the Figures.



4b)_____ x _____ = _____

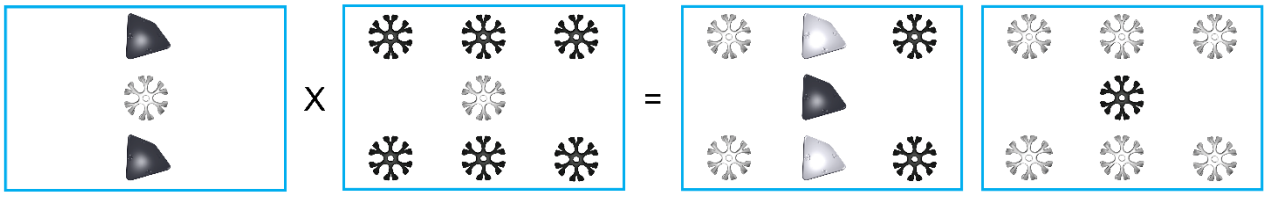
Multiplication by Successive Addition (up to 9) Worksheet

5) Multiply the number of HyPars in the first Figure by the number of HyPars in the second Figure using successive addition. Circle the third or fourth Figure that has the correct total. Fill in the equation below the Figures.



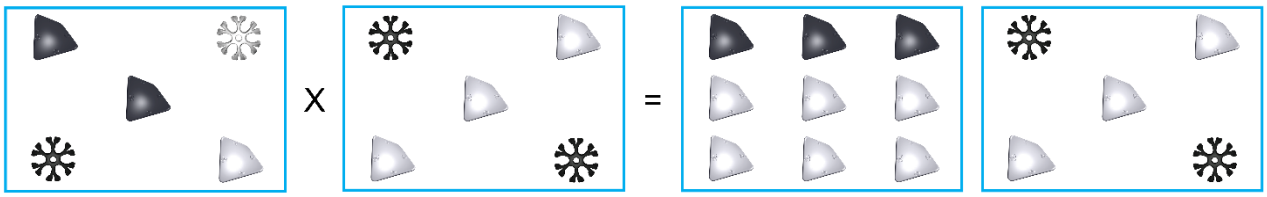
5b) _____ x _____ = _____

6) Multiply the number of Connectors in the first Figure by the number of Connectors in the second Figure using successive addition. Circle the third or fourth Figure that has the correct total. Fill in the equation below the Figures.



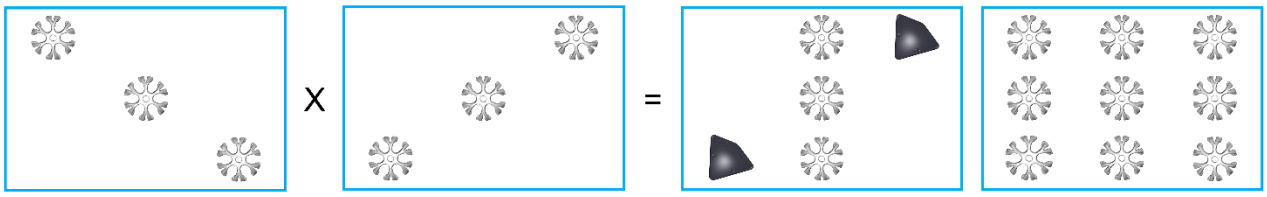
6b)_____ x _____ = _____

7) Multiply the number of black HyPars in the first Figure by the number of black HyPars in the second Figure using successive addition. Circle the third or fourth Figure that has the correct total. Fill in the equation below the Figures.



7b)_____ x _____ = _____

8) Multiply the number of white Connectors in the first Figure by the number of black Connectors in the second Figure using successive addition. Circle the third or fourth Figure that has the correct total. Fill in the equation below the Figures.



8b)_____ x _____ = _____