

Grade Level / Content Area:	Grade 3-5 / Math - Multiplication
Standards:	CCSS.MATH.CONTENT.3.OA.A.1 CCSS.MATH.CONTENT.3.OA.A.3
Concept/Topic to Teach:	Multiplication by 4s and 5s

### *I. Getting students set to learn Addition*

**Introduction/Review;** Review the multiplication work recently completed by the class.

**Anticipatory Set;** Explain that we are going to learn how to multiply by 4s and 5s in today's lesson. Demonstrate that when you multiply by 4 you have 4 times the original amount and that when you multiply by 5 you have 5 times the original amount. Explain that any number multiplied by 0 equals 0.

**Objectives;**

- The students will be able to multiply small numbers by 4s and 5s.
- Students will explain to the teacher what multiplication by 4s and 5s does to the original amount.
- Students will be able to verbally tell the teacher what the answer is when 1, 2 and 3 are multiplied by 4 and what the answer is when 1, 2 and 3 are multiplied by 5.

### *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 by 4s and 5s.

- From the HyPars Educational Kit parts, have each student make two groups of four parts (consisting of some HyPars and some Connectors).
- Ask the students what  $2 \times 4$  equals (have them count the equal groups of parts they have for the answer) and what  $4 \times 2$  equals.
- Ask the students to assemble (connect) the entire group of parts and then again ask how many parts are in this first assembly.
- Upon confirmation of each student understanding the multiplication of  $2 \times 4$ , have the students get five groups of three parts from their HyPars Educational Kits (including some HyPars and some Connectors).
- Ask the students what  $5 \times 3$  equals (have them count the 4 equal groups of 2 parts they have for the answer) and what  $3 \times 5$  equals.
- 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 4s and 5s Worksheet

1a) Multiply the number of HyPars in the first Figure by the number printed between the Figures. Circle the third or fourth Figure that has the correct total. Fill in the equation below the Figures.

1b) \_\_\_\_\_ X \_\_\_\_\_ = \_\_\_\_\_

2a) Multiply the number of Connectors in the first Figure by the number printed between the Figures. Circle the third or fourth Figure that has the correct total. Fill in the equation below the Figures.

2b) \_\_\_\_\_ X \_\_\_\_\_ = \_\_\_\_\_

3a) Multiply the number of black HyPars in the first Figure by the number printed between the Figures. Circle the third or fourth Figure that has the correct total. Fill in the equation below the Figures.

3b) \_\_\_\_\_ X \_\_\_\_\_ = \_\_\_\_\_

4a) Multiply the number of black Connectors in the first Figure by the number printed between the Figures. Circle the third or fourth Figure that has the correct total. Fill in the equation below the Figures.

4b) \_\_\_\_\_ X \_\_\_\_\_ = \_\_\_\_\_

## Multiplication by 4s and 5s Worksheet

5a) Multiply the number of HyPars in the first Figure by the number printed between the Figures. Circle the third or fourth Figure that has the correct total. Fill in the equation below the Figures.

$\begin{array}{|c|c|} \hline \text{HyPars} & \text{HyPars} \\ \hline \text{HyPars} & \text{HyPars} \\ \hline \end{array} \times 4 = \begin{array}{|c|c|c|c|} \hline \text{HyPars} & \text{HyPars} & \text{HyPars} & \text{HyPars} \\ \hline \text{HyPars} & \text{HyPars} & \text{HyPars} & \text{HyPars} \\ \hline \end{array} \quad \begin{array}{|c|c|} \hline \text{HyPars} & \text{HyPars} \\ \hline \text{HyPars} & \text{HyPars} \\ \hline \end{array}$

5b) \_\_\_\_\_ X \_\_\_\_\_ = \_\_\_\_\_

6a) Multiply the number of Connectors in the first Figure by the number printed between the Figures. Circle the third or fourth Figure that has the correct total. Fill in the equation below the Figures.

$\begin{array}{|c|c|} \hline \text{Connector} & \text{Connector} \\ \hline \text{Connector} & \text{Connector} \\ \hline \end{array} \times 5 = \begin{array}{|c|c|c|c|} \hline \text{Connector} & \text{Connector} & \text{Connector} & \text{Connector} \\ \hline \text{Connector} & \text{Connector} & \text{Connector} & \text{Connector} \\ \hline \end{array} \quad \begin{array}{|c|c|c|c|c|c|} \hline \text{Connector} & \text{Connector} & \text{Connector} & \text{Connector} & \text{Connector} & \text{Connector} \\ \hline \text{Connector} & \text{Connector} & \text{Connector} & \text{Connector} & \text{Connector} & \text{Connector} \\ \hline \end{array}$

6b) \_\_\_\_\_ X \_\_\_\_\_ = \_\_\_\_\_

7a) Multiply the number of black HyPars in the first Figure by the number printed between the Figures. Circle the third or fourth Figure that has the correct total. Fill in the equation below the Figures.

$\begin{array}{|c|c|} \hline \text{Black HyPars} & \text{Black HyPars} \\ \hline \text{Black HyPars} & \text{Black HyPars} \\ \hline \end{array} \times 4 = \begin{array}{|c|c|c|c|} \hline \text{Black HyPars} & \text{Black HyPars} & \text{Black HyPars} & \text{Black HyPars} \\ \hline \text{Black HyPars} & \text{Black HyPars} & \text{Black HyPars} & \text{Black HyPars} \\ \hline \end{array} \quad \begin{array}{|c|c|} \hline \text{Black HyPars} & \text{Black HyPars} \\ \hline \text{HyPars} & \text{HyPars} \\ \hline \text{HyPars} & \text{HyPars} \\ \hline \text{Black HyPars} & \text{Black HyPars} \\ \hline \end{array}$

7b) \_\_\_\_\_ X \_\_\_\_\_ = \_\_\_\_\_

8a) Multiply the number of black Connectors in the first Figure by the number printed between the Figures. Circle the third or fourth Figure that has the correct total. Fill in the equation below the Figures.

$\begin{array}{|c|c|} \hline \text{Black Connector} & \text{Black Connector} \\ \hline \text{Black Connector} & \text{Black Connector} \\ \hline \text{Black Connector} & \text{Black Connector} \\ \hline \text{Black Connector} & \text{Black Connector} \\ \hline \end{array} \times 5 = \begin{array}{|c|c|c|c|} \hline \text{Black Connector} & \text{Black Connector} & \text{Black Connector} & \text{Black Connector} \\ \hline \text{Black Connector} & \text{Black Connector} & \text{Black Connector} & \text{Black Connector} \\ \hline \end{array} \quad \begin{array}{|c|c|c|c|c|c|} \hline \text{Black Connector} & \text{Connector} & \text{Black Connector} & \text{Black Connector} & \text{Black Connector} & \text{Black Connector} \\ \hline \text{Black Connector} & \text{Black Connector} & \text{Black Connector} & \text{Black Connector} & \text{Black Connector} & \text{Black Connector} \\ \hline \text{Black Connector} & \text{Black Connector} & \text{Black Connector} & \text{Black Connector} & \text{Black Connector} & \text{Black Connector} \\ \hline \text{Black Connector} & \text{Black Connector} & \text{Black Connector} & \text{Black Connector} & \text{Black Connector} & \text{Black Connector} \\ \hline \end{array}$

8b) \_\_\_\_\_ X \_\_\_\_\_ = \_\_\_\_\_