

## Parent Academy 4<sup>th</sup> Grade

What are the major math skills my student needs to know by the end of 4<sup>th</sup> grade?

*Major clusters outlined by CCSS:*

- Use the four operations with whole numbers to solve problems.
- Generalize place value understanding for multi-digit whole numbers.
- Use place value understanding and properties of operations to perform multi-digit arithmetic.
- Extend understanding of fraction equivalence and ordering.
- Build fractions from unit fractions by apply and extending previous understandings of operations on whole numbers.
- Understand decimal notation for fractions, and compare decimal fractions.

## 5<sup>th</sup> Grade

What are the major math skills my student needs to know by the end of 5<sup>th</sup> grade?

*Major clusters outlined by CCSS:*

- Understand the place value system.
- Perform operations with multi-digit whole numbers and with decimals to the hundredths.
- Use equivalent fractions as a strategy to add and subtract fractions.
- Apply and extend previous understandings of multiplication and division to multiply and divide fractions.
- Geometric measurement: understand concepts of volume and relate volume to multiplication and to addition.

Ideas to support your 4<sup>th</sup> or 5<sup>th</sup> grader:

- Provide opportunities for your child to use measurements (carpentry, sewing, exact time, cooking).
- Grocery shop with your child and estimate the total cost of all groceries prior to checkout.
- Ask your child mathematical questions and look for reasonable answers (examples: How many miles is it from our house to the mall? How long will it take us to travel from our house to the grocery store?).
- Practice mental mathematics and mathematical facts (without paper, pencil, calculators or materials) with my child. Example: How many eggs are in 3 dozen?
- Find examples of fractions, decimals, and percent in everyday life and explain to your child what they mean (such as buying gas, newspaper ads, shopping, sports).
- Play mathematical board and computer games with your child.

The games and activities you'll find in this packet primarily focus on fact fluency.

*These activities have been adapted from: k-5mathteachingresources.com, Angela Andrews, and D41 Parents as Partners.*

## The Factor Game

**Why:** To rehearse multiplication facts and develop understanding of prime and composite numbers.

**Materials:** The factor game worksheet, pencil, paper clips, markers or chips in two colors to cover numbers.

### **How to play:**

1. First player places paper clips on 2 factors and tells the product.
2. Then, that player covers the product with a counter. For instance, the player might place the paper clips on 4 and 6 and over the number 24 on the worksheet with a red counter.
3. Next, the 2<sup>nd</sup> player now can move only one paper clip onto another number (factor) and cover that product. For instance, the 2<sup>nd</sup> player may move the clip from the 4 to the 6. The factors will now be 6 x 6, so the 2<sup>nd</sup> player would cover 36 with his/her blue counter.
4. Play continues until one player has captured four numbers in a row horizontally, vertically or diagonally. This player is the winner.

\*It is permissible to cover the same number with both clips.

## “Salute!”

**Why:** To rehearse multiplication facts.

**Materials:** Deck of cards (face cards removed)

**How to play:**

1. This game is for 3 players.
2. The dealer hands a card to each of the 2 other players without letting anyone see the numbers on them.
3. At the same time, the players say, “Salute!” as they each hold the card to their foreheads so they can see the opponent’s card but not their own.
4. The dealer, who can see both cards, announces the product of the two numbers.
5. Each player tries to figure out the number (factor) on his/her card.
6. The player who announces the correct factor wins both cards.
7. Continue until all cards are used.
8. The player with more cards wins.

# Numbingo!

**Why:** To practice flexible use of operations, strategy development, probability and chance.

**Materials:** Plain paper, pencil, pair of regular dice

## **How to play:**

1. Fold your paper into 16 squares.
2. Write each number of 1-16 in the upper right hand corner of each square in any arrangement you choose.
3. Leader rolls two die and announces the two numbers rolled.
4. Players may choose any math operation and enter the equation in the box with the correct answer in the upper right hand corner. For example, if a 4 and 3 were rolled, players could enter the equation  $4 + 3$  in the 7 box,  $4 - 3$  in the 1 box, or  $4 \times 3$  in the 12 box. You may only write in one box, so players must choose carefully.
5. The first person to use 4 boxes in a straight line, vertically or horizontally (but not diagonally), calls out "Numbingo!" and wins the round.

**Numbingo Board**


## **Product Call Out**

This game is played by two students with a deck of cards with the jokers and face cards removed. Students shuffle the deck and deal them all out face down. Each player simultaneously flips over a card from his or her pile. The first player to call out the correct product gets to collect the two flipped over cards. If a player calls out the wrong product the other two players get the cards.

## **Buzz**

The game is used to practice skip counting or review a specific times table. The leader chooses a number between 2 and 9. The leader says 1; the next player says the 2, and so on. When they reach a multiple of the number chosen, the player says “buzz” instead of the number. If a player forgets to say buzz or says it at the wrong time, he or she must sit until another player also makes an error, at which time they are “back in the game.” Play continues until the group reaches the last multiple of the number times 10.

## **Break My Eggs**

Write numbers in the bottom of egg cartons.

Put two manipulatives in the egg carton.

Close the lid and have the students shake the carton and multiply the two numbers together.

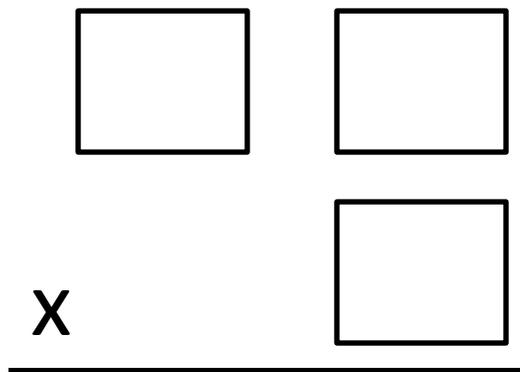
# The Greatest Product

**Why:** To develop a deeper understanding of multiplication and place value concepts.

**Materials:** Single digit die or cards from 0-9.

**How to Play:**

1. Roll a die or pick a card from the deck.
2. Students begin to write that digit in the arrangement shown below.



3. Continue until 3 digits have been picked, then multiply.
4. The player with the greatest product wins!

**Extensions:**

Give 3 numbers. Have students figure out all the different ways these digits can be arranged on the table. Figure the products. What did you learn?

Give 3 numbers and a predetermined product. Challenge students to find the arrangement which will give this product.

## Divingo

**Why:** To practice division facts and develop an understanding of division concepts.

**What:** Divingo board, deck of regulation playing cards with aces counting as ones, tens, counting as zeros, and face cards removed.

**How to Play:**

1. Each player has a game sheet.
2. Leader draws from the face down deck of cards and reads the number aloud.
3. Each player chooses a square to write the number in. Once written, the number cannot be moved.
4. The player to complete three division problems correctly in any row, column, or diagonal is the winner.

## The Factor Game

<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>
<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>	<b>12</b>	<b>14</b>
<b>15</b>	<b>16</b>	<b>18</b>	<b>20</b>	<b>21</b>	<b>24</b>
<b>25</b>	<b>27</b>	<b>28</b>	<b>30</b>	<b>32</b>	<b>35</b>
<b>36</b>	<b>40</b>	<b>42</b>	<b>45</b>	<b>48</b>	<b>48</b>
<b>54</b>	<b>56</b>	<b>63</b>	<b>64</b>	<b>72</b>	<b>81</b>

0 1 2 3 4 5 6 7 8 9

Divingo Game Sheet

4		

7		

3		

6		

10		

5		

2		

8		

9		